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THE

COMMERCIAL REVIEW

OF THE

SOUTH AND WEST.

A MONTHLY JOURNAL
OF TRADE, COMMERCE, COMMERCIAL POLITY, AGRICULTURE, MANUFACTURES, INTERNAL IMPROVEMENTS AND GENERAL LITERATURE.

EDITED BY
J. D. B. DE BOW,
PROFESSOR OF POLITICAL ECONOMY, COMMERCE AND STATISTICS, IN THE UNIVERSITY OF LOUISIANA, NEW ORLEANS.

VOLUME VII.—NEW SERIES, VOLUME I.

NEW ORLEANS:
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1850.

DE BOW'S COMMERCIAL REVIEW.

NEW ORLEANS CHAMBER OF COMMERCE, MAY 14, 1846.

Be it Resolved, That this Chamber highly approves of the *Commercial Review*, a periodical established in this city by J. D. B. De Bow, Esq., and recommends it to the patronage of the commercial community.

Charles Briggs, Secretary. SAMUEL J. PETERS, President.

CHARLESTON MERCANTILE LIBRARY SOCIETY, FEB. 1847.

In exercise of the power given them by the Constitution, the Board have unanimously elected as Honorary Members, Freeman Hunt and J. D. B. De Bow, Esqrs. These gentlemen are entitled to wide and honorable distinction. The former in originating the *Merchant's Magazine*, the first successful attempt of its kind in the United States, sustained and conducted as it has been by marked ability. The latter one of our own citizens, in the laudable spirit which prompted the establishment of the *Commercial Review* of the South and West, and the masterly pen which he has wielded in elucidation of the commercial interests of the South, have richly earned our most grateful acknowledgments.

A. O. ANDREWS, President.

CHARLESTON CHAMBER OF COMMERCE, OCT. 26, 1846.

On motion of Col. James Gadsden,

Resolved, That the *Commercial Review*, edited in New Orleans by our fellow citizen, J. D. B. De Bow, Esq., is a work well calculated to exercise a most favorable influence on the commercial interests of the South and West.

Resolved, That the zeal and talent with which it has been commenced, and the able articles which have appeared in its pages (as foreshadowing on the future the promises of the past), strongly recommend the *Review* to the patronage of the Southern community, and that the Chamber of Commerce of Charleston feel gratified at the opportunity of presenting to the public this testimony in its favor.

W. B. HERIOT, Secretary.

CINCINNATI MERCANTILE LIBRARY SOCIETY, JAN., 1849.

Resolved, As the sense of the Mercantile Library Association of Cincinnati, that *De Bow's Commercial Review* of the South and West supplies an important desideratum in the mercantile literature of this great western valley; that the comprehensive views and practical attainments of Professor De Bow are special qualifications for conducting such a periodical, and that this Association very cordially recommend the *Commercial Review* to general favor, and the special patronage of our mercantile community.

HUNT'S MERCHANTS' MAGAZINE, NEW YORK.

De Bow's Commercial Review for May contains much valuable matter of a Commercial and Miscellaneous character. It has reached its *seventeenth* number, which is, in our opinion, the best of the series. Success to our namesake. The paper which has interested us most, is that entitled "Commerce and Agriculture Subjects of University Instruction," from the pen of the accomplished editor of the Review, in which he submits the plan of a Professorship of Public Economy, Commerce and Statistics, for our Colleges and Universities. The plan has our hearty approval, and will, we trust, ere long, be adopted by some of our higher institutions. The article on "Charleston and its Resources," we shall endeavor to find room for in a future number of this Magazine.

103079

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THE

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OF THE

SOUTH AND WEST.

CONDUCTED BY

J. D. B. DE BOW,

PROFESSOR OF POLITICAL ECONOMY, COMMERCE, AND STATISTICS, IN
UNIVERSITY OF LOUISIANA, NEW ORLEANS.

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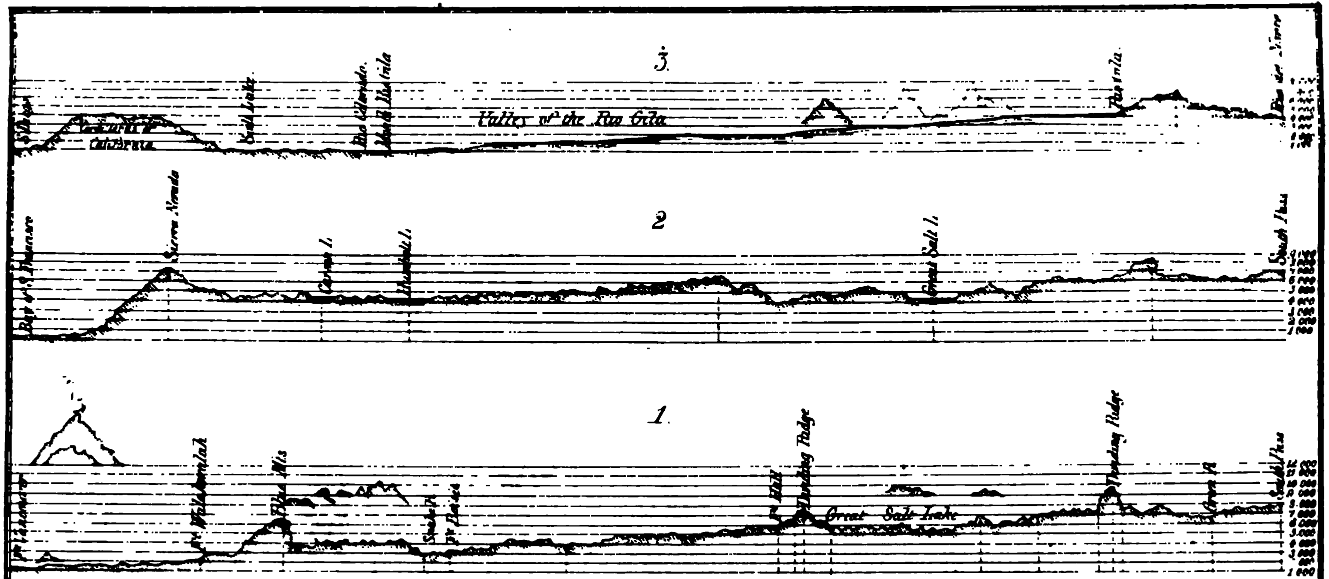

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THE

COMMERCIAL REVIEW.

Vol. VII, Old Series. JULY, 1849. Vol. I, No. I, N. S.

ART. I.—COMMUNICATION BETWEEN THE ATLANTIC AND PACIFIC OCEANS.

PROGRESS OF AMERICAN POPULATION AND TERRITORIES: CALIFORNIA AND OREGON; PROJECTED COMMUNICATIONS ACROSS THE CONTINENT BY LAND AND WATER; PANAMA AND TEHUANTEPEC CANALS AND RAILROADS; TRADE AND COMMERCE OF THE EAST; RAILROAD FROM TAMPICO AND NATCHEZ TO MAZATLAN; FROM VERA CRUZ TO ACAPULCO; FROM GALVESTON TO SAN DIEGO; FROM ST. LOUIS TO SAN FRANCISCO; FROM MICHIGAN TO OREGON; FROM MEMPHIS TO SAN DIEGO; PROGRESS OF RAILROAD ENTERPRISE.

From a period almost coeval with the first settlement of America, we find the idea of a connection between the two great oceans, washing its eastern and western shores, by some safe and expeditious passage, either over the peninsula or through the interior of the continent, continually suggested, and receiving various degrees of consideration. The subject has assumed, in the present day, a new and higher degree of interest and importance, from the fact, so little to have been anticipated, that the American people, with the extraordinary energy of their democratic institutions, having filled up with a dense population all the earlier discovered and occupied territories, have, while yet scarce "hardened into manhood," swept across the "impassable" mountains, overspread the great valleys, and penetrated in immense numbers through the wildernesses of the Oregon, the Sacramento, and the Gila, to the very shores of the Pacific Ocean. The free and unconquerable spirit of the Puritan, the Cavalier, and the Huguenot, creates new revolutions in the regions of the setting sun.

But sixty years ago, when the first American *census* was taken, the main slope of the Apalachian Mountains, was found to be the western barrier, confining nine-tenths of the population within something like three hundred thousand square miles of territory.* The four millions of inhabitants at that time registered, have swelled in this period to nearly twenty-three millions, and the three hundred thousand miles of inhabited territory to two millions of miles, excluding the late acquisitions of Oregon, California, and New Mexico, embracing, by the estimation of the land office, eight hundred and sixty-seven thousand five hundred and forty-one additional square miles! Thus have we a people, blessed with freedom and enterprise, doubling in every generation their numbers, and occupying an empire three millions of square miles in extent—scarcely less than the whole of Europe, *including* Russia, and wanting *one-third* only of the great Russian empire, extending from the Baltic, over *three continents*, to the western spurs of the Rocky Mountains. The sea-coasts alone of this enormous republic stretch out *five thousand one hundred and twenty miles;* or, if we follow the irregularities of the bays and islands, *thirty-three thousand and sixty-three miles*—greater, by one-third, than the whole circuit of the earth! *

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* Darby's Letter to Mr. Calhoun, Com. Review, Vol. III.

Frightful as have been the wastes to be crossed by this population, the "feet of men, and even children and tender women, have been beating out a track," over which the heavy wagon has rattled, among crags and rocks, in *defiance* of the vain obstacles of nature.

Most wonderful of all—in the depths of the valleys, and by the streams of the rivers they have crossed, has been discovered a region that realizes the fabled *El Dorado*, for which De Soto and Cortes and Raleigh so vainly sighed—possessing in its bowels illimitable treasures of virgin gold, so rich and rare, that they promise to easy labor, almost without effort, untold wealth, and to the world a supply of the precious metals which shall exceed all the "Orient Ind," in the days of Solomon or since, has yielded from its prolific bowels, or has been searched to where the "sunny fountains" of "Old Afric"

> "Roll down their golden sand."

Never, in the history of mankind—not even when Columbus carried to Europe the tawny Indian, or when extravagant stories of the wealth of the Mexicans and of Peru, were wafted across the ocean, or when the Crusaders were marching upon the East, or the "South Sea Bubble" or the "Mississippi Scheme" were at their height—never has been excitement wound up to a higher pitch, or expectancy upon the keener alert. Men of all ages—of all arts, and pursuits, and professions, from all classes of society, even surrounded with the greatest comforts and highest allurements of home—have forgotten their legitimate avocations, thrown aside lucrative posts and callings as utterly worthless, and, braving the ocean for thousands and tens of thousands of miles, or inhospitable climes, and frightful journeys through trackless wildernesses, in handfuls or in vast cavalcades, full of hope and enterprise, taken up their extraordinary pilgrimage to endure the fierce hardships of the *placers* of the Sacramento, and the mountain gorges, in their ceaseless search for GOLD! Wonderful, wonderful is this great passion for wealth, which, like a despot, rules over our wills and controls and masters our associations and affections, and breaks up, with remorseless strokes, every link and bond and sacred connection in life! God, by it, works out the DESTINIES OF MAN.†

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* Report Coast Survey, under Prof. Bache, 1848.

† The Spaniards would appear to have been on this California gold track three centuries ago, but destiny reserved the prize for us. We quote from the "American Review."

"At the same period, also, while De Soto worked his weary way amidst the

But we have not time for these reflections. It is now computed that the whole number of persons who have reached California cannot vary far from twenty thousand,[*] and that those on the way, and to start, will, in a few months more, swell the aggregate to at least fifty or sixty thousand—sufficient to form a state government. What may be the future population of this region it is now impossible to argue, though embracing, as it does, an area of five hundred and twenty-six thousand and seventy-eight square miles, if we give to it the average density of *two* to the square mile, the density of the Valley of the Mississippi as far back as 1810, when but few states had been formed, we would have one million of inhabitants; or, adopting the present density of Pennsylvania, there would be abundant room for twenty millions. A similar computation being made for Oregon, which has three hundred and forty-one thousand four hundred and sixty-three square miles, would give either seven hundred thousand or fifteen millions. It would not be an unreasonable calculation, we think, to estimate a population west of the Rocky Mountains, in the course of one century from this, *as large*

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mountains and among the reedy marshes of the East, and the second Pizarro searched vainly for the *El Dorado* of the South, Vasquez Coronado was equally indefatigable in his search for the traditionary golden cities and inexhaustible mines of New Mexico and California. In common with De Soto and the South American explorers, he failed in the primary object of his expedition; failed, too, if we may fully credit the announced discoveries in California, when the coveted prize of his toil was almost within his grasp.

The expedition by Coronado was undertaken under an implicit belief in the existence of vast treasures in the regions north of Mexico, falling within the territories known as New Mexico and California, and now constituting part of the republic of the United States. This belief was based upon accounts, somewhat vague it is true, but all concurring in substance, and was universally entertained by the Spaniards of that day. The sea expedition on the Pacific, undertaken by Ulloa in 1539, under the direction of Cortez, had for its object not less the discovery of the golden region of the north than the exploration of the coast. And when, in 1540, it was resolved to send northward a land expedition upon the same search, the right of command was contested between Cortez, as Captain General of New Spain, and Mendoza, as Viceroy of Mexico. The latter was successful, and Cortez, disappointed and disgusted, returned to Spain. This incident will show how high were the anticipations which the Spaniards had formed of the riches of the Californian El Dorado. The documents of that period, which have been recovered from the rich historical depositories of Spain, present us with some singular illustrations of the extravagant notions then prevalent; and, although to a great extent proved by subsequent events to be unfounded, are, nevertheless, at this time not without their interest."

[*] The number which left the United States between December 14th and April 17th last, was. according to the Herald :

RECAPITULATION.

Total in	226	vessels,	via	Cape Horn	14,191
“	52	“	“	Chagres	3,547
“	11	“	“	Vera Cruz	698
“	11	“	“	Brazos	765
“	3	“	“	Corpus Christi	103
“	2	“	“	San Juan River	118
“	2	“	“	Tampico	87
“	1	“	“	Galveston	86
“	1	“	“	Lavaca	122
Total in	309	“			19,7

as the *present population* of the Union. There are causes at work to indicate this.

Three years ago, as if impelled by a vision of this western progress, [illegible] to receive the most powerful impetus, the people of the south-west and west repaired to Memphis in one great convention. We were a delegate to that body from South Carolina, and well remember the enthusiasm which was excited by the remark of her great statesman, who presided on the occasion: "In less than one generation, the West will be engaged in deliberations to extend its connections with the Pacific, as it is now with the Atlantic, and that connection will be as intimate with the one as the other. In the end, we will command the commerce of both, and this great valley become the center of the commerce of the world." Mr. Calhoun was right, though the shadows were cast more rapidly than even he could conceive. *The hour is already come!* A second great western convention is proposed, and delegates are again invited from wide-spread regions to Memphis, on the Fourth of July.* The occasion is a fitting one for the investigation and discussion we now propose.

Until the late explorations conducted by Col. Fremont, very erroneous ideas have prevailed in regard to the character of the country to the westward of the Rocky Mountains. It was customary to denounce it a hopeless, sterile waste, where the arts of civilized men could never prevail. Imperfect as the explorations have been, the most fruitful and abundant regions have been already found, with the finest climates, forests, and streams. Artificial irrigation is regarded practicable where these last have been wanting. We have the valley between the blue and far west mountains—the beautiful country of the Walla-Walla—the regions about the Columbia, from the straits of Fuca to the waters of the Umpqua—the much abused and little understood "Great Basin," where Fremont found a "rich alluvion soil"—the valleys of the Sacramento and San Joaquin—the country to the northward of the Bay of San Francisco, as well as toward Monterey—the valley of St. Joseph and to the southward of Point Conception—Monterey Bay, Los Angelos, &c., &c. "I read," says Mr. Benton, "to show that there is good country in the mountains; but I have more beautiful yet to shew—the 'Three Parks,' unsurpassed by any thing in Switzerland, replete with all the beauty of the most picturesque parts of Switzerland, and without glaciers."

We believe that this whole region will eventually be one of flourishing empire. Its most unfavorable sites will not suffer in the comparison with some of the most inhospitable of *prosperous* New England. The improvements in arts has made the desert and the wilderness bloom. As yet, imagination cannot even picture the treasures in gold and precious stones which are concealed among the mountains and through the beds of rivers. These must necessarily attract a large population, and build up villages and great cities. With a command of the precious metals, the inhabitants may have the command of commerce. The East is before them, at their very doors; that East which has furnished rich products from all antiquity, and held out golden visions of unlimited trade to all civilized nations; the East which built up Alexandria—which caused Venice to spring from the marshes of the Adriatic, and the "abodes of fishermen" to rival in splendor, pomp and magnificence, all the world had hitherto seen; the East that enriched the Portuguese, enabled the Dutch to compete for the sovereignty of the seas, and gave at last to their great rival across the channel, as it were, the very trident of Neptune himself. There is no fancy in this. Western America may have her high destiny too; and we, and all the world else, may seek to share it with her, by opening channels of frequent intercourse and communication.

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* We have the circular of the committee on correspondence before us, and an able paper by the same gentlemen in pamphlet form, containing a most interesting letter from Lieut. Maury to Mr. T. Butler King. We hope to attend the convention, and take part in its proceedings.

Neither California nor Oregon are more distant from the seats of eastern commerce on the Pacific, than is Europe from our Atlantic coasts, yet already have we an annual commerce with Europe of about two hundred and fifty millions of dollars. Is not Western America, in the progress of her history, capable of a similar trade by the Pacific? Her ports and harbors, Fuca, San Francisco, Monterey, San Diego, if not all that could be desired, are at least sufficient.

Western America can compete with Europe in the eastern trade, being several months nearer—all experience showing that the amount of trade increases generally in a ratio with the facilities and rapidity of intercourse. She can compete with *Eastern* America in this same trade for a similar reason. Admitting a dense and enterprising population beyond the mountains, these propositions cannot be disputed. The great question, however, occurs, and this will determine the whole matter, *can Western America herself be brought into connection with the Atlantic, and thus with Europe, so as to enable her to trade with the world in India products, on such terms as will secure the monopoly?* At present she has no such connection, but is isolated and alone, and must resort to the seas upon less advantage than Eastern Asia. Shall she ever remain so?

Let us see what has been proposed since the earliest periods, to connect the shores and commerce of the American continent, and whether any plan is practicable, and which? The time has come to settle this question. But first it is well to determine what Eastern America has to gain in the event of success, or in other and plainer language—*what is the value of eastern commerce?**

When Venice conducted the commerce of the East she supplied all the world with its products. The disadvantages of this trade were great, land carriage as well as sea, and various shipments and reshipments, yet the richness of the trade endured them all, and made her "Queen of cities—a new Tyre." The Byzantians had long before conducted the same trade, by voyages up the Indus, overland communications to Oxus and down to the Caspian Sea, navigation to the Volga, transportation again across the country to the Tanais, thence to the Euxine, with a reshipment there. Precious indeed must be the trade which can flourish amid all these obstacles!

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* Mr. T. Butler King, in his able report upon the Panam arailroad, adverts to one great cause of British commercial supremacy, that "she not only has the ports of the continent of Europe as her neighbors, but she is *fifteen hundred miles*, or two weeks, nearer than we are *to all the other.ports of the world, except the Atlantic ports of the American continent north of the equator and the West*

As facilities of intercourse with the East, however, increased after the discoveries of the Portuguese, Spanish, Dutch and English, we find the European trade with Asia prodigiously augmented. In the best days of Venice (A. D. 1400) this trade did not exceed 20,000,000 ducats, or require above 600 ships of 600 tons each. Whereas including America now, according to a report made to Congress, by Mr. Breese, and adding for increase since his dates, and value of ships engaged, the whole commerce of the East with all the world, annually, may be estimated at 300,000,000 of dollars, requiring 2,000 ships.

Indies. He furnishes the following interesting table of distances to be saved by the Panama route.

Places.		New route from New York.	Old route from New York.	From Liverpool.
		Miles.	Miles.	Miles.
To Calcutta, via	Cape of Good Hope	......	17,500	16,000
	Cape Horn	......	23,000	21,500
	Isthmus of Panama	13.400	......	......
To Canton, via	Cape of Good Hope	......	19,500	18,000
	Cape Horn	......	21,500	20,000
	Isthmus of Panama	10,600	......	......
To Shanghae, via	Cape of Good Hope	......	20,000	18,500
	Cape Horn	......	22,000	20,500
	Isthmus of Panama	10,400	......	......
To Valparaiso, via	Cap Horn	......	12.900	11.400
	Isthmus of Panama	4,800	......	......
To Callao, viz	Cape Horn	......	13,500	12,000
	Isthmus of Panama	3,500	......	......
To Guayaquil, via	Cape Horn	......	14,300	12,800
	Isthmus of Panama	2,800	......	......
To Panama, via	Cape Horn	......	16,000	14,500
	Isthmus of Panama	2,000	......	......
To San Blas, via	Cape Horn	......	17,800	16,300
	Isthmus of Panama	3,800	......	......
To Mazatlan, via	Cape Horn	......	18.000	16,500
	Isthmus of Panama	4,000	......	......
To San Diego, via	Cape Horn	......	18,500	17,000
	Isthmus of Panama	4,500	......	......
To San Francisco, via	Cape Horn	......	19,000	17,500
	Isthmus of Panama	5,000	......	......

TABLE I.—*Statement of the number of vessels, amount of tonnage and crews, which entered and cleared at the ports of the following countries from and to ports beyond the Cape of Good Hope and the Pacific.*

	INWARD.			OUTWARD.		
	Ships.	Tonnage.	Men.	Ships.	Tonnage.	Men.
England, 1842	877	329,404	16,698	823	348,724	18,468
United States, 1845	329	111,180	6,998	367	125,582	8,305
France, 1833	117	36,040	2,048	117	36,040	2,038
Antwerp, 1839	7	2,860	125	1	272	12
Bremen, 1841	6	1,800	100			
Hamburg, 1841	10	5,000	200	10	5,000	200
Netherlands, 1840	188	97,231	5,150	221	113,862	5,625
Russia with China, estimated from the commerce now overland, to require	50	25,000	1,000	50	25,000	1,000
Total	1,584	608,515	32,319	1,589	654,480	35,648

TABLE II.—*Value of trade conducted by above shipping.*

		IMPORTS.	EXPORTS.
Great Britain		$85,527,120	59,187,185
France		16,310,295	8,238,050
Antwerp, no statistics but estimated on number of ships		700,000	500,000
Hamburg, " " " "		500,000	400.000
Bremen, " " " "		610,000	400,000
The Netherlands		23,527,390	4,702,000
United States		11,438,403	5,443,828
United States, from whale fishery, for 1845:			
157,700 bbls. sperm oil @ 88	$4,371,444	8,300,957	
272,809 " whale oil @ 33⅓	2,864,495		
3,195,054 lbs. bone @ 33⅓	1,065,018		
		146,814,165	78,871.063
Add overland Russia with China		12,048,055	7,581,295
Total		$158,862,220	86,452,358

The number of vessels employed in trade beyond the Cape of Good Hope is estimated at 2,000, of the value $60,000,000. Passengers to and from Bombay and England annually, about 4,000, paying from 5 to 900 dollars each, and occupying 40 to 50 days.* Extra baggage $15 per hundred pounds. English mails to Bombay and China $2,000,000, making $4,000,000 expended annually in passengers and mail to the East.

Now there can be little doubt that the trade with eastern countries is susceptible of almost unlimited extension, were their distance lessened one-half, or two-thirds, and the time of travel reduced in a similar proportion. Many new products would then endure transportation which are now too perishable or bulky. The travel also would be increased. In truth there would be added millions and hundreds of millions of eastern consumers. The Sandwich Islands are but in their infancy. There are a million and one-half Polynesian Islanders; Celebs contains 3 millions; and Java 5 or 6 millions, who export $30,000,000 annually to Holland. Sumatra, with a population of 2,000,000, exports 30,000,000 pounds spices. Borneo, with 3 to 4 millions, exports gold, tin, antimony, and diamonds. The Phillipines, have 3,500,000, producing sugar, coffee, indigo, hemp. Singapore is the center of Indian trade; India contains 184,000,000 inhabitants, including Cabul and Affghanistan, Calcutta, Bombay, Madras, Ceylon, etc., with a commerce of $150,000,000 annually. Australia is an infant, but promising, colony. Russian America, now unimportant, Manchoo Tartary, and the great Sanghalin river, 4,000 miles long, connecting with Pekin; Japan, with 50,000,000 people and the richest products, now almost closed to commerce; China, 360,000,000 inhabitants, on the coast 274,000,000, with its Chang-hee, or Shang-hai, at the mouth of the mighty Yang-tsee-keang, 4,000 miles long, the Mississippi of China.

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* This of course is by the overland route by Gibraltar, Alexandria, Cairo Suez, the Red Sea, etc. In a late number of *Chambers's Miscellany* is described the route, 39 or 40 days, and the expense £120, $600, from Southampton to Bombay.

Can it be imagined that these vast regions, so densely populated, have already reached the acme of their foreign trade, or is it not plausible, when better systems of intercourse are opened, jealousies removed, and civilization extended, that trade with them will be augmented two or three fold, reaching, perhaps, in the aggregate, five to eight millions of dollars? Instead of two thousand travelers visiting the East, per annum, in such a contingency, would not the number reach nearer twenty thousand, which, at half the present rates of travel, would realize six or eight millions of dollars?

The question occurs again, how can we connect ourselves with the Pacific by a route so advantageous, in every respect, as will enable us to command, if not to monopolize, its commerce, and augment it in the manner indicated? And this brings us to a *historical consideration of the various projects, past and present, looking to a connection between the Atlantic and Pacific oceans.*

In the search of a western and shorter passage to India, Columbus discovered the American continent, as the Portuguese had skirted along Africa and doubled the Cape for an eastern passage. The Portuguese rested in their brilliant discoveries, and in the wealth which they brought. Spain, on the contrary, still sought the nearer route, and explored the American continent, in the hope of finding some strait or channel through it to India. She sought in vain in the extreme North; about the Isthmus of Panama; along the Mexican coasts, and throughout the extent of all South America; finding, however, the Straits of Magellen, and ultimately, though long afterward, Cape Horn. These were far from presenting the much desired advantage.

No sooner had Cortez been securely established in Mexico, than he commenced anew the search, with the greatest minuteness, throughout all the coast. He wrote to the Emperor: "I have received information as well of the riches of the country, as that, in the opinion of many navigators, *there exists a strait leading to the opposite sea.*" He writes again: "Should we, with the Divine assistance, so hit upon this strait, that the navigation from the spice countries (the East Indies) to the kingdom of your Majesty would become excellent and shorter, so much so *that it would be two-thirds less than the present navigation*, and without any danger to the ships in going or coming," etc., etc.

The Spaniards appeared, at last, satisfied in this quarter, and sent out expeditions to north-west of America, in the hope of greater success there. In one of these was explored the Gulf of California, and in another Friar Marcos asserted the discovery of regions, which no one afterward could find, northwest of Mexico, beyond 35° of latitude, abounding in gold, silver, precious stones, and a civilized population![*] The final conclusion was, that no navigable passage existed South of the latitude of 40°, and soon, says Mr. Greenhow, the Spanish policy maintained, "the discovery of any passage, facilitating the entrance of European vessels into the Pacific, would be deleterious to the power and interest of Spain in the New World."[†]

About the middle of the sixteenth century, a direct commerce was opened between the Spanish East India possessions and Mexico. For the first time Europeans crossed the Pacific in direct voyages from Asia to America. "Large ships, called galleons, sailed annually from Acapulco to Manilla in the Phillipines, and to Macao and China, laden with precious metals and European merchandize; in return for which they brought back silks, spices and porcelain, for consumption in America, or for transportation over the Atlantic to Europe; while an extensive trade, in articles equally valuable, was carried on between Panama and the various ports of Peru and Chili."

The English now appear upon the theater; and, jealous of the lucrative branch of commerce which has sprung up, the buccaniers, under Drake and Cavendish, infest the waters of the western world. To this period may be traced the ingenious fictions of a passage in the northwest, *through the continent*, so long credited and known, even upon the maps, as the *Straits of Anian*, or of *Fuca*.

Between the years 1600 and 1760 the search was continued, with various interest, and resulted in the discovery of Baffin's Bay and Hudson's Straits. Near the close of the eighteenth century, the English, Spanish and American navigators made frequent expeditions to the northwest, and their respective discoveries became a question of keen and lively interest and discussion but lately, in the settlement of the *vexata questio* of Oregon. The English chapter exhibits the results of Alexander McKensie, one of her citizens, who traversed British America, from Canada to the Pacific, being in search of an inland route across the continent.

The Sieur de la Salle entertained the idea, as his dispatches will show, that, by following the Mississippi to its sources, a communication could be had with the waters of the Oregon and the Pacific, and the commerce of the East commanded by France, through her province of Louisiana.[‡]

Thomas Jefferson, two hundred years later, and soon after the Louisiana purchase, following the idea of La Salle, dispatched Lewis and Clarke on an expedition to the northwest, by the way of the Mississippi, to find, if possible, *a route of commercial communication* to the Pacific.[§]

So much, then, for the history of this interesting subject, and now for the various projects of our own day, toward the accomplishment of the same great end. They are either,

I. By CANAL, or

II. By RAILROAD.

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[*] Was this California?

[†] Hist. Oregon and California, p. 65.

[‡] Vid. Spark's La Salle.

[§] Lewis and Clarke's Expedition, vol. 1.

Of each there are several routes proposed, with various degrees of merit, which it is our present purpose to examine. And first, as to canals. These are,

1. By the Isthmus of Panama, or Darien.
2. By the Lake of Nicaragua.
3. By the River Atrato, from the Gulf of Darien.
4. By the Isthmus of Tehuantepec.

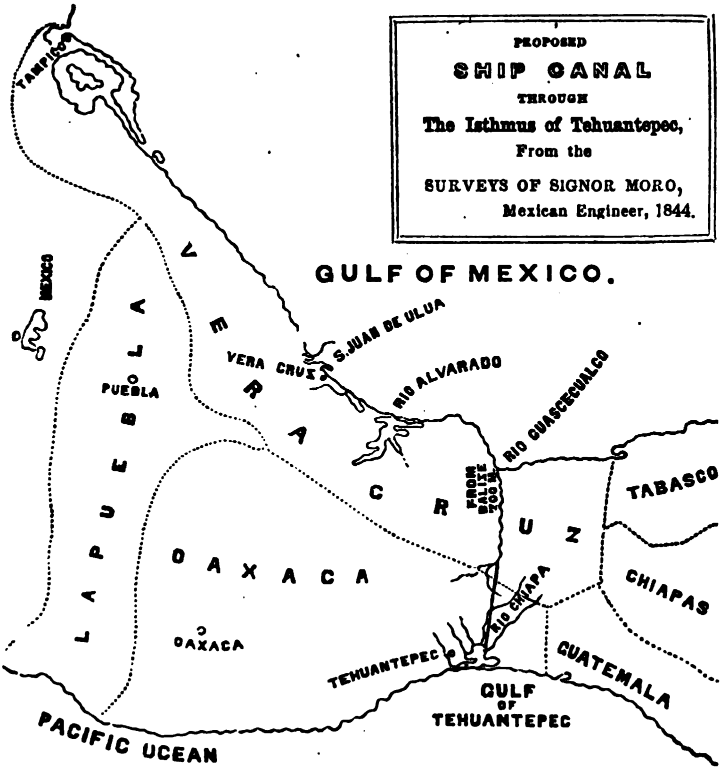
Others, less practicable, were proposed by Humboldt, but we shall consider now only those of Panama, Nicaragua, and Tehuantepec.

1. PANAMA. This is the narrow neck of land connecting the two Americas; in the province of New Grenada; between the parallels of 8° and 11° north latitude; varying in breadth from twenty-eight to forty-eight miles, and with a population of 7,200. The Andes afford many gaps, or passages, and the country presents no insurmountable obstacles to a canal, which it is estimated may be built for $40,000,000. The late conquest of California has given an interest to Panama, far greater than it has previously had. Lines of steamers constantly ply from northern ports to Chagres, on the Atlantic, and other lines from Panama, on the Pacific, to San Francisco and Oregon. Little difficulty is found by passengers over the isthmus, who are conveyed more than half the way in canoes. We have seen the most glowing accounts of the expedition, the scenery and aspect of the country, even from the pens of delicate females. The rigors of the climate and the rainy season have been greatly exaggerated.

2. NICARAGUA. This lake is situated between 11° and 12° north latitude; its extent is large, and its navigable waters are carried to the Carribean sea by the river San Juan—navigable during the rains, according to McCulloch, throughout its whole extent. Four to twelve feet water is always afforded in the Rio Juan, and it is proposed to improve its navigation, or to construct a canal from the Lake Nicaragua, which is adapted to ships of largest burthen, to the Pacific, fifteen and three-fourths miles, through a country elevated, in general, not more than nineteen feet. The level of the lake is one hundred and thirty-four feet above the Pacific, and the difference in level between the two oceans is twenty or twenty-two feet. For a canal, there must be one mile of tunnel, and two miles of deep cutting through volcanic rock, and also a great number of locks. Mr. Bailey, under direction of the State of Nicaragua, made a survey in 1837–8, and estimated the cost of a canal at about $30,000,000.

3. TEHUANTEPEC. The Rio Guascecualco has its mouth in the Mexican province of Vera Cruz, seven hundred miles from the mouth of the Mississippi river. The route across the Isthmus follows the course of the river as far as Tarifa, at which town a canal or rail-road will begin, passing into the western lakes which are discharged into the Pacific. The width of the Isthmus in this part is one hundred and thirty-five miles, and its central mountainous chain exhibits a depression in the line of the route. For twenty-five miles a plain is formed, whose streams flow North and South. There are passes or gates here, such as Chivola and Tarifa. The northward streams enter the Guascecualco—the southern, the Chiapa, which is discharged in the lake east of Tehuantepec, on the Pacific. We have before us the survey and charts

of Moro, appointed, in 1832, surveyor under Garay, who had obtained the right of way from Mexico, for fifty years, and the property in all the lands for thirty miles on either side—the passage to be opened to all nations, and considered *neutral* ground. The Spanish engineer conceives the whole extent of the Guascecualco may be rendered navigable by artificial means, and without exhorbitant cost. He proposes also to remove the bar on the Pacific entrance, and estimates the whole expense of the canal 85,000,000 francs—less than $20.000,000. We have prepared the following map from the charts of Moro:



The late Vice President, Geo. M. Dallas, strongly advocated the Tehuantepec route, in an able and elaborate paper, and suggested the importance of a clause in the treaty of peace with Mexico, securing to us forever the right of way. The Mexicans, it is understood, would not listen to this; though it is likely, as they can never hope to make the improvement themselves, they would, upon some more suitable occasion, readily make the concession.

In regard to the canal communication it is difficult to pronounce an opinion. The Americans would never undertake it, we think, unless—which is hardly to be expected, at least for half a century—the territories were ours, or unless an overland communication across our present possessions were found impracticable. Would the British? And this, too, must depend upon the chances of our railroad, as above hinted at. If that succeeds, of course the Isthmus canal would be unnecessary, and we opine that one would require as long to build as the other. But this is anticipating. When the American continent becomes as densely populous as Europe, these, and many other connections, may all be in successful operation together.

Let us now pass to the various projected railroad routes across the continent. They are--

1. Across Panama—the Aspinwalls.
2. Aross Tehuantepec—Mr. Hargous.
3. Tampico to Mazatlan.
4. Natchez to Mazatlan—Mr. Patterson's.
5. Galveston to San Diego—Gen. Houston.
6. St. Louis to San Francisco—Mr. Benton's.*
7. Lake Michigan to Oregon and San Francisco—Mr. Whitney.
8. Memphis to San Diego, Monterey, or San Francisco.

Of these, the first four are either wholly, or in part, through *foreign* territory and the remainder entirely through our own. We take them in order.

1. Panama Railroad. At the last session of Congress considerable excitement prevailed in regard to the proposition of Mr. Aspinwall and others to construct this road, on consideration of a contract from Government, to carry the mails, troops and government stores, for ten years, at $250,000 per annum. The road to be guaranteed complete in three years, and to charge Americans no more than $8 each, for passage, and $8 per ton, freight. These rates to be reduced after the first five years to $5 each, and three-fourths of the road to be owned by citizens of the United States.

Able speeches were made in the Senate, by Messrs. Benton, Douglass, Clayton, Webster and Dayton, in advocacy of the scheme, and by Downs, Niles, Allen, Butler, Davis and Foote, in opposition. We give some extracts from the debate, as possessing great interest.

Mr. Benton said:

> "It is therefore a temporary road for us—not temporary for other nations—but for us it is a temporary road across the Isthmus of Panama, as a step toward the accomplishment of this great design which Mr. Jefferson conceived, and for the accomplishment of which I have been collecting information and studying details for thirty years; and I intend at a proper time to bring in a bill, with those details, for commencing the location and construction of the road. With this explanation of my views of the projected route across the isthmus of Panama, that we are to use as a temporary route, it will be seen that the first thing we have got to do is to go about it at once—to do it immediately, or the whole object is lost. I am for no permanent road outside of my country. I am for no permanent road for America, either across the isthmus of Darien, Tehuantepec, or anywhere else. I am only for a temporary measure, with respect to any route, sir; but I take that one which can be got first, and which will answer our purposes better than any

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* A memorial was presented, at last Congress, to carry the mail between these two points by express, on the part of W. A. Bradley, and others, and reported on by Mr. Bell and Senator Rusk.

We read, also, in the Railroad Journal, the memorial to Congress, of Bayard, praying aid in constructing a railroad from St. Louis, intersecting the Rio Grande, Red and Gila rivers; and one from Dennis Keenan, Jr., proposing a railroad and magnetic telegraph, from Point Isabel, Texas, to the Pacific. Truly is this an age of enterprise.

other. If we undertake to institute comparisons between different routes, even if we have a legal and political right to do so, why, sir, the very object for which I want a road outside of our own country is lost. I want it, sir, directly. I want it for present use; and if we have to wait, why, sir, we may as well throw up the whole, and wait for our own. I have no idea, sir, of doing anything permanent outside of our country—no idea of going into expenses, or bargains, or arrangements, which are to keep me outside of my own country one moment beyond the time that we are able to finish our road."

Mr. Webster said:

"I have a strong disposition to think the measure is a proper one. The extraordinary circumstances of the country call for it. There is nothing in those circumstances likely to make them so short-lived and temporary, as that within a year or two, or any number of years, we may justly apprehend and consider that this work will not be necessary; and I repeat again, that if there were a proposition at the same time for the other work, if it were in as advanced a state as this, and we were to have but one, I should give the preference to the other; and I fully believe both are to be accomplished, and still other modes of communication are to be established across our own territory, without any occasion to enter the territories of other countries."

Mr. Clayton said:

"This is to be an American road. It will have that character abroad, do what you may. American citizens are entrusted with the construction of it. Well, if this work is to be, and be called an American work, I desire that it should be a road worthy of the American name; and in my opinion the American government should, within its constitutional sphere, aid, as far as it can, individual enterprise in making a road worthy of the American character. I do not want a road attempted there by individuals and carried on by piecemeal, commencing with a railroad of a few miles, and perhaps ending for some years to come with a plank or a mule road. I desire that the improvement should go on continuously and in the shortest practical time. And now allow me one general remark in regard to the sum to be expended. I would aid, as far as the constitutional power of the government will enable us to do it, in making a road from the Mississippi river to the Pacific, or a road across the isthmus of Tehuantepec, as I design to aid in the construction of the road proposed by this bill; and whatever the cost of a passage by canal or railroad across to the Pacific on either isthmus may be, whether two millions, two and a half millions, six millions, twenty millions, or even fifty millions, I say, sir, that the wit of man cannot find any other mode of expending the same amount of money as much for the benefit of this country and of the whole human family. And I repeat that I do think that, in the middle of the nineteenth century, it is a disgrace to the government that nothing has yet been attempted with success to save our commerce the dangerous navigation of nine thousand miles around the cape. I take the proposition now before us because it is practicable. I would not delay the work from year to year and from day to day. If we can, by expending the sum of two and a half millions of dollars, or less, accomplish so great an object, I say for one that I am willing to authorize the expenditure."

The objections to the bill were strongly urged—that it was a contribution *indirectly* for internal improvements; that the monopoly would be in violation of the treaty with Grenada, making the passage *free;* that the amount to be paid by government would itself build the road; that the consideration offered by the company was inadequate; that it would be unfortunate for the government to be bound down so long a time to a route far beyond our own country; that the steamers to Chagres must enter the Carribean, an enemy's sea, perhaps, and have their coal depots at Jamaica; that it is far less desirable, and not more practicable, than the Tehuantepec route, etc., etc.*

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* It was understood that this was a mere questiōn of time, and the Aspinwalls would build the road in ten years, whether they had the government contract, or not.

Mr. Underwood said:

> "Now, sir I have given you these speculations and these data, and if there be any thing in them at all, it is very manifest that it is to be the most profitable route for the investment of capital on the face of the earth. There is to be nothing like it. It is to transcend every other railroad that has been constructed. And what, then, are you doing. It is a contribution on the part of the government—a departure from all the principles of the constitution—to make millionaires of the members of this company. That, sir, is your bill. I believe it was suggested that it was an extra-territorial improvement. So much the worse for me; so much the better for my argument, but worse for my feelings. I want to improve my own country. I want to make a railroad—one or two, if you please—across the valley of the Mississippi to the Pacific; but I want it in our own country, if I can get it. I will not object to this, if you will place it on a basis by which I can see that we get an equivalent for the money which we pay; but I will not give a cent—I am too democratic for that—by way of exclusive privileges to a favored few. With the views I have taken of this matter, based on the figures which I have read, and looking at what the government will give under this act, and what individuals must pay, it must be the most profitable investment on the face of the earth. To this bill, then, sir, I am altogether opposed. I am further opposed to it, because we have not the data upon which to act, and because I believe that this thing has taken a step which it should not have taken."

2. Tehuantepec Railroad. This was a proposition of Mr. Hargous, of New York, who has a grant for fifty years from Mexico to build the road—that Republic to impose no taxes upon travelers or imposts, to allow foreigners to acquire real estate and exercise all trades, except mining, for fifty leagues on either side of the road. But we adopt the words of the memorial:

> "'From these surveys it is established that the entire distance from sea to sea is one hundred and thirty-five miles, in a straight line, and presents a wide plain from the mouth of the Guascecualco to the port of the Meza de Tarifa, a table or elevated plain on the line of the Andes, which rises to the height of six hundred an fifty feet above the level of the sea, and at the distance of five miles again descends to a plain which reaches the Pacific. The summit level to be overcome is only six hundred and fifty feet. Thirty miles of the river Coatzacoalcos are navigable for ships of the largest class, and fifteen miles beyond this for vessels of light draught, leaving only about one hundred and fifteen miles of railroad to be made. It would occupy too much space to enumerate all the details of these surveys, and which go to show so strongly how easily a railroad can be constructed across the Isthmus of Tehuantepec. It is sufficient to say that the absolute practicability has been clearly ascertained.'
>
> "In other respects it affords great facilities for construction. 'The entire course of the Guascecualco is bounded by forests, which can supply immense quantities of the proper kind of timber suitable for the construction of a railroad, and all of which is, by the terms of the grant, the property of the company undertaking the construction of the road. Limestone, strong clay, asphaltum, and building stone of the best quality, suitable for bridges where necessary, are placed as if purposely by Nature, all along the direction of this route. The Zapotecos and other Indians can be found in quite sufficient numbers to carry on the work, and at those points where foreign labor is indispensable, the temperature is such as to allow them to pursue their labor without either inconvenience or injury to their health. The climate, though warm, is healthy. The natives are mild, submissive, and tractable. There are ample sources whence to obtain a stock of domestic animals and beasts of burden. Throughout the whole line secured by the grant, as well for the purposes of a communication across the isthmus as for the settlement of the country by foreigners, all the productions of the equatorial and temperate regions are found in the greatest abundance;' for the valley of the isthmus produces the former, and on ascending to the more elevated country bordering on the valley, the climate of the temperate zone is found there, as well as its productions. At each end of the railroad are suitable places for fine harbors, as well as to depth, size, and security from storms. It is true, there is a bar at the mouth of the Guascecualco. By different navigators the water has been sounded

and from twelve to eighteen feet have been found on it at low water. Commodore Perry, in his survey in 1847, found twelve feet. At a small pass at the entrance of the ocean, on the Pacific side, there is at low water seven feet. Your petitioner, however, is convinced, from the character of the obstructions, that they can, at a small expense of time and money, be removed easily, and will then open an entrance for vessels of large size into ports equal to any in the world. He is prepared to show this to the satisfaction of your honorable body.

"Such are some of the physical advantages connected with this route. There are others, however, no less important. The distance from the mouth of the Mississippi to San Francisco by the Isthmus of Tehuantepec is 3,294 miles, by the Isthmus of Panama 5,000—thus showing that the route by the Isthmus of Tehuantepec is 1,706 miles shorter than by Panama. The distance from New York by the Isthmus of Tehuantepec is 4,744 miles, by the Isthmus of Panama 5,858—making the route by Tehuantepec from New York to San Francisco 1,104 miles shorter than by the Isthmus of Panama."

Mr. Foote offered the following remarks and table:

"From New York to Chagres and the mouth of the Guascecualco river, the distance will be about the same for steam vessels; but that for sail vessels, the route to Chagres is much the longest, as a vessel might have to go outside of Cuba, St. Domingo, and Jamaica, in order to get into the current controlled by the trade winds; that the Panama route strikes the Pacific ocean some twelve hundred miles (more or less) more distant from California than the terminus on the Pacific of the Tehuantepec route; that the Tehuantepec route passes through a healthy country, whilst the Panama route traverses a region confessedly more sickly than any in North America besides; that from New Orleans it is 650 miles further to Chagres, than to Guascecualco; that the marine route to the eastern terminus of the Tehuantepec route is altogether in the Gulf of Mexico, whereas the Chagres route is outside of all the West India islands (a highly important consideration in time of war); that the soundings on the bar at Guascecualco are, according to the highest authority, at most seasons of the year, from 18 to 20 feet, and never lower than 12 feet 3 inches, with a tide of two feet; that distinguished English engineers have reported that $3,000,000 will be necessary to make a safe and convenient port at Tamon bay; that at Panama, vessels cannot approach nearer than three miles, and a pier will have to be constructed about that distance; whereas, at Boca Barra, where the Tehuantepec route is to terminate on the Pacific, there is a fine port; and, finally, that the following table (which I request to be read) may be fully relied on in all respects:

Voyage.	Distance in nautical miles.	Distance via the isthmus of Tehuantepec.	Difference saved.
New York to Boca Barra, round Cape Horn, crossing the line in long. 26° W., Rio Janeiro, Valparaiso, Callao and Boca Barra,	12,390	3,330	9,060
New York to Canton, by the Atlantic and Indian oceans, crossing the line in long. 26° W., going to lat. 41° S., and eastward to long. of St Paul's, and thence by the straits of Sunda,	15,540	11,950	3,590
New Orleans to Boca Barra, round Cape Horn, to St. Thomas, Rio Janeiro, Valparaiso, Callao and Boca Barra,	12,510	900	11,610
New Orleans to Columbia river, round Cape Horn,	14,830	3,220	11,610
New Orleans to Columbia river, inland journey, up the Mississippi, up the Missouri, and across the Rocky Mountains,	3,400	3,220	180
[*Note.*—This has a land journey of 900 miles, full of difficulties.]			
New York to the Columbia river,	......	5,650	

Mr. Dayton, in opposition to the road, read a letter from Col. Abert, of the Topographical Engineers, and from Lieutenant Maury. We extract first from Col. Abert:

"It is supposed that the railroad of this route will pass through Chevela as its summit pass, about 700 feet above the ocean on either side. The communication with the Pacific on the southern side is by means of two small lakes, called the Upper and Lower lake. The railroad landing will, probably, be on the Upper lake, and the developed length of the road from the landing to Chevela will not, I think, be less than thirty-five miles. The northern terminus of the road, at a point where the navigation of the Gulf of Mexico ceases, will be at the lower end of Tacamichapa island, an island of the Guascecualco river. A straight or air line cannot be taken as a line for the length of the road, which must of necessity deviate from such a line and occupy the valley of the principal streams.

"From information derived from those much interested in this route, I am induced to believe that a railroad can be located between Chevela and the point on the Guascecualco before designated of not less than 120 miles. This would make the whole road 155 miles long.

"From the surveys of our navy, when on duty in the Gulf during the late war, twelve feet water was found over the Guascecualco bar, and it is also said that at times this depth is increased to fourteen feet.

"During the season of northers, it is represented as a dangerous, if not impassable bar, rarely approached during that season, as the adjacent coast affords no adequate shelter. The harbor on the Gulf side is the Guascecualco river, a safe and good harbor after the bar is passed.

"The harbor on the Pacific side is the lakes or lagoons before described; for Tehuantepec bay is an open roadstead, without protection or shelter of any kind, and this bay is represented as being liable to frequent and violent tempests. The entrance to these lagoons is through a narrow passage between the lower lagoon and the Pacific, called the Boca Barra. It cannot be made by sailing-vessels with an adverse wind, nor by steamers, under such circumstances, without great difficulty and danger. The inside of Boca Barra is closed by a bar, over which not more than eight feet of water has been found.

"This route being 155 miles (of railroad), if it be supposed to cost as much as the Panama route (and I do not see how it can cost less), the total cost will be $12,913,900.

The total length of the Tehuantepec route can be stated as follows:
155 miles of railroad.
15 of water, through the two lakes to the Pacific.
30 (about) of river navigation, from the foot of Tacamichapa island to the Gulf
—— of Mexico.
200 miles.

Lieut. Maury remarks,

There is now in the course of publication at this office a chart of the mouth and bar of the Guascecualco, from a very accurate survey made by Lt. Leigh, by order of Commodore Perry, in 1848. It appears by that, that there is not more than 12½ feet water on the bar at the mouth of that river.

I would here remark that there is in this office also a manuscript copy of Cayetano Moro's survey of the Isthmus of Tehuantepec, under the Garay grant. The original, from which this copy was taken, was found by Commander Mackenzie at Mina-titlan in 1847, in possession of one of the assistants on that survey, and the copy here was made by Lt. May, by order of Commodore Perry.

The surveys by our own officers differ so widely and in such essential particulars from the Moro Survey, that they discredit it in some of its most important features, and show it to be unworthy of confidence.

Lt. Leigh's soundings I know to be correct. His chart was constructed in this office with a great deal of care, and his note-books are here on file for reference. Lt. Leigh makes but 12½ feet on the bar, Cayetano Moro 6.2 metres, or 20⅓ feet English.

Thinking there might be some mistake in the matter, which Commodore Perry could explain, I referred the Moro survey to him, and called his attention to this discrepancy as to the depth of water on the bar—a vital feature in the advantages of the route. By letter of the 25th ultimo he replies with regard to the Moro map: "I notice on a side sketch of the bar the shoalest water marked at 6.2

metres. This is certainly wrong, as I have crossed the bar several times myself, sounding both ways, and the average depth in the channel has not exceeded 12½ feet. With regard to the depth of water on the Pacific side, it is not more, however, than six or eight feet. I do not find the Boca Barra recognized by any chart or book as a harbor or port into which vessels may enter. Ventoza is an open roadstead about twenty miles west of Boca Bara; it is without shelter, and vessels are driven out to sea by every gale at a moment's warning.

The following table shows the shortest navigable route in nautical miles, upon arcs of great circles, from New York to the mouth of the Guascecualco and Navy Bay, also from New Orleans to the same places.

	Guascecualco.	Navy Bay.*
New York, via Hole in the Wall, - -	1,800	
do south side Cuba, - -	2,870	1,920
New Orleans, - - - - - - -	800	1,450

On account of winds and currents, the average time under canvass, from New York, is rather less to Navy Bay than to Guascecualco by either route.

3 TAMPICO AND MAZATLAN RAIL ROAD. We have merely seen this suggested, and believe no survey has been made. The distance would not exceed seven hundred miles. Mexico, it is not likely, will ever have the means of constructing such a road across her territories. A far better road is, however, proposed by the Mexicans, from Vera Cruz to Acapulco, passing through Jalapa, Cordova, Puebla, Cuernavaca and Mexico; the entire mule route being, according to the common itineraries, from Vera Cruz to Mexico, 252 miles, from Mexico to Acapulco, 270 miles—in all, 522 miles. A greater difficulty than the length, however, is the immense height which has to be ascended and descended in the passage between the two seas. Mexico is a vast mountain ridge, or plateau, wide at the north, narrowing rapidly at the south, but still preserving throughout its general height, which averages between seven and eight thousand feet, or about one mile and a half in perpendicular altitude. The city of Mexico itself, is no less than some seven thousand six hundred feet above the sea Nor is this the worst; for from this mountain ridge rise the minor ridges, or chains of mountains, half as high again almost, which require to be climbed. Thus, between the valley of Mexico and the Gulf, is the ridge of Rio Frio, upwards of ten thousand feet high; and on the west, that of El Marques, of about the same altitude. Doubtless, lower depressions in these ridges might be found; but no engineer would think lightly of the task of locating a working railroad, free from planes and tunnels through mountains of solid porphyry, over such a country as central Mexico.†

4. NATCHEZ AND MAZATLAN RAILROAD. This route has been advocated by Mr. Patterson of Louisiana, Col. Gadsden of South Carolina, and Professor Forshay. In his report to the South Carolina Railroad Company, in 1846, Col. Gadsden says: "In conection with their Atlantic communications with Vicksburg, Grand Gulf and Natchez, crossing the Mississippi at one or all of these points, roads are already projected looking further to the west, which, uniting on a common trunk, in the rapid progress of south-western extension and emigration, will in time be made to course, through the new acquired territory of Texas, and by the Mexican provinces, to a terminus at Mazatlan in the Bay of Califor-

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* Near the Isthmus of Darien and forty-four miles from Panama, by sea.

† New York Courier and Enquirer.

nia; or, taking a more northern direction, by the valley of the Red and Arkansas rivers, may easily pass by the southern gorges in the Stony Mountains, and find, in the course of events, certain though slow, a more imposing location in the Bay of San Francisco on the Pacific." Col. Gadsden published at the same time a map of the route.

In July, 1848, Mr. Forshay published in our Review a paper upon this railroad and a map, entering into many interesting particulars and details. The distances and expense he assumes as follows:

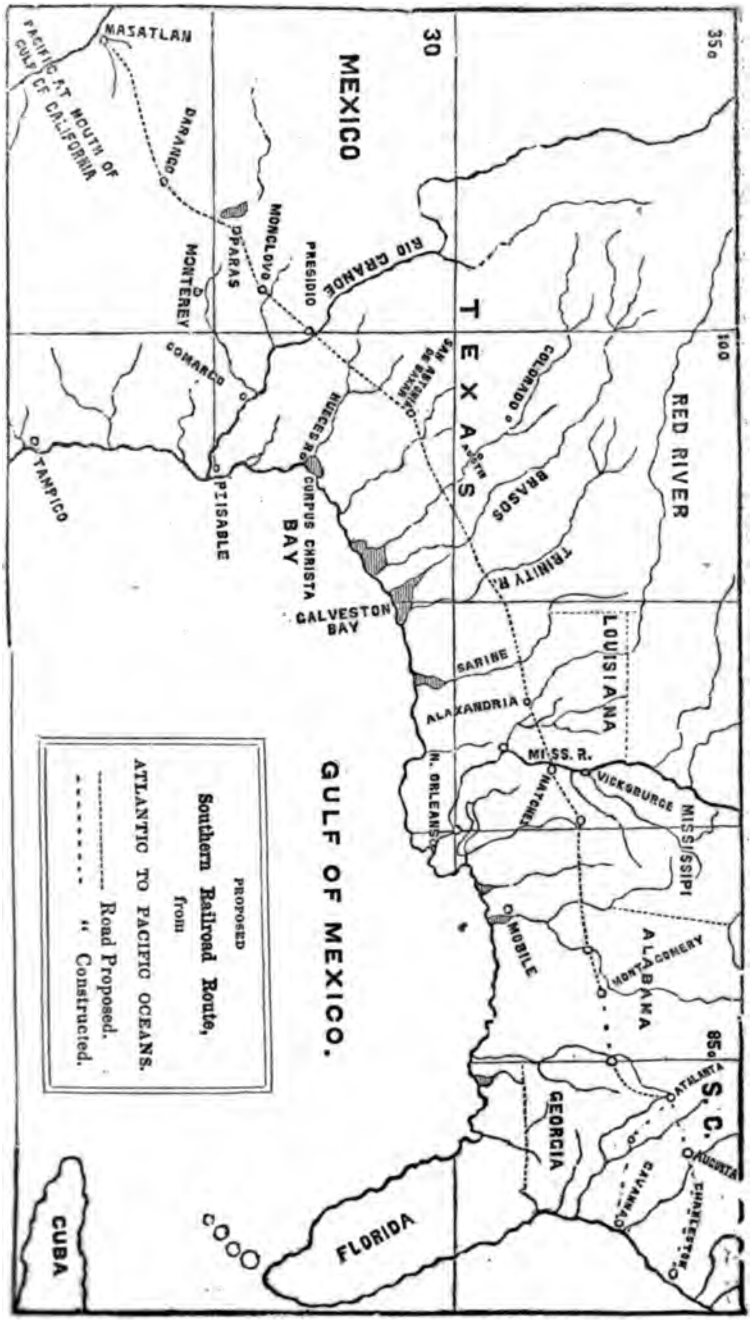
Natchez to Trinity,	26	miles.	Level.
Trinity to Alexandria	54	"	Level—one grade twenty feet per mile.
Alexandria to Cotile	20	"	Level without obstacle.
Cotile to Sabine	50	"	Undulating, some hills and rocks—170 miles, $ 1,500,000 cost.
Sabine to San Antonio	400	"	Undulating gently.
Antonio to Rio Grande	150	"	" " —550 miles, $ 5,500,000.
Rio Grande to Mountains	100	"	One hill, not steep.
Mountains to Hot Springs	20	"	Hilly between Mountains.
Hot Springs to Monclova	50	"	Hills, but no rocks—170 miles, $ 2,200,000.
Monclova to Bazan	30	"	Between mountains.
Bazan to La Joya	14	"	Calcareous, dusty roads.
La Joya to Veneditto	34	"	Same—no water—easy pass, &c.
Veneditto to Sanceda	22	"	Barren—Sanceda, finely cultivated road between mountains.
Sanceda to Jarrol	16	"	Road rough and broken, no mountains—cultivated valley.
Jarrol to Pastora	16	"	Dry, barren, but not rugged.
Pastora to Tenago	8	"	
Tenaga to Cienaga	20	"	Rough and difficult.
Cienaga to Obuya	18	"	Splendid valley.
Obaya to Parras	5	"	" " —181 miles, $ 2,800,000 cost.
Parras to Durango	220	"	Table lands.
Durango to Rosario River	70	"	Mountainous.
Rosario to Muzatlan	130	"	Along the river,—420 miles, $ 10,000,000 cost.

Grand total, 1491 miles, $ 22,000,000 cost.

We insert a map of this route as furnished by Mr. Forshay.

In dismissing those roads through *Mexican* territory, we may be allowed to express our strong preference for that by the way of Natchez, through Texas. New Orleans and the south-west would be greatly benefited by its construction. Our preferences, however, will readily yield, if some other point on the Mississippi, not greatly more distant, and passing *altogether* through *our own* territories, can be suggested. We are sure the enlightenment of the south-west will understand and act upon this principle when they assemble in convention.

5. GALVESTON AND SAN DIEGO RAILROAD. We believe this is advocated by Gen. Houston, and was proposed by a public meeting in Texas. The route runs from Galveston Bay north-west, to 32° latitude; thence westward, crossing the Rio Grande above El Paso; thence along the Gila valley to the Colorado, etc. etc. Length estimated at twelve hundred miles, though, by *our* computation, it cannot fall short of fourteen hundred miles It will be remembered that the Santa Fe expedition, in 1841, took the route from Austin across the valleys of the Colorado and the Brazos, due north to the latitude 32½, or what is called the *Cross Timbers*; thence between the valleys of the Red and the Brazos rivers, west to 101° longitude; thence north-west to the Colorado, and passing


PROPOSED
Southern Railroad Route,
from
ATLANTIC TO PACIFIC OCEANS.
Road Proposed.
" Constructed.
MEXICO
GULF OF MEXICO.
TEXAS
LOUISIANA
MISSISSIPI
ALABAMA
GEORGIA
S. C.
FLORIDA
CUBA
RED RIVER
RIO GRANDE
MASATLAN
PACIFIC AT MOUTH OF GULF OF CALIFORNIA
DARANGO
PARAS
MONCLOVO
PRESIDIO
MONTEREY
COMARGO
TAMPICO
PIISABLE
NUECES R.
CORPUS CHRISTA BAY
SAN ANTONIO DE BAXAR
COLORADO
AUSTIN
BRASOS
TRINITY R.
GALVESTON BAY
SABINE
ALAXANDRIA
MISS. R.
VICKSBURGE
NATCHES
N. ORLEANS
MOBILE
MONTGOMERY
ATLANTA
AUGUSTA
SAVANNAH
CHARLESTON
30
35°
100
85°

through the Angosturas to San Miguel. We suppose this route was adopted from its supplies of water, and to avoid the Comanche Indians. Whatever advantage, it occurs to us, in distance, a road across from the sea-coast of Texas might possess, and that would not be considerable, it is attended with the great *disadvantage* of being too far southward in its Atlantic terminus, to be central or to interest any number of States. A work so stupendous must be the common work of America, and for this it ought, as nearly as possible, to be *central.* Besides, the harbors in Texas have not sufficient capacity or depth for extensive commerce in the largest class of shipping. Texas herself, as well as Louisiana, would readily yield her claims, in favor of any better projection.

6. ST. LOUIS AND SAN FRANCISCO ROAD. This was proposed, at the last session of Congress, by the Hon. Thomas Benton. The provisions of the bill were, that three-fourths in value of California and Oregon land sales, and one-half of all other land sales, be appropriated by Congress for the construction of the road, with a branch to the Columbia river; where the rail-road is not practicable, macadamized road to be used—track of one mile breadth from the Missouri frontier to San Francisco, to be reserved for this road and other roads; track of one thousand feet width to the Columbia—road to be built under directions of the President of the United States—road, when completed, to be let out by contract, by government, etc. etc. In defense of this stupendous enterprise, after quoting from Gibbon to prove that the Romans had greater ones, Mr. Benton thus eloquently concludes:

> "Such was the extent and solidity of the Roman roads—a single line of road above four thousand Roman, and equal to three thousand seven hundred and forty English miles—and the four thousand cities of the empire all connected with roads of equal solidity besides. The road which we propose is only half the length of one chain of theirs. I mention them for their magnificence—their grandeur—and as presenting an example worthy of our imitation. The road I propose is necessary to us, and now. We want it now. The state of our possessions on the Pacific demands it. The time to begin has arrived. All the necessary information is on hand. The means are ready. The title to Oregon is settled, and a government established there, and population is growing up. California is acquired: people are there: and a government must follow. We have a fleet on that coast—troops there and going. Streams of population are concentrating there. Since the discovery of the New World by Columbus, there has not been such an unsettling of the foundations of society. Not merely individuals and companies, but communities and nations are in commotion, all bound to the setting sun—to the gilded horizon of western America. For want of an American road, they seek foreign routes, far round, by sea and land, to reach by an immense circuit what is a part of their own land. Until we can get a road of our own, we must use and support a foreign route; but that is a temporary resource, demanded by the exigency of the times, and until we can get our own ready. Never did so great an object present itself to the acceptance of a nation. We own the country from sea to sea—from the Atlantic to the Pacific—and upon a breadth equal to the length of the Mississippi—and embracing the whole temperate zone. Three thousand miles across, and half that breadth, is the magnificent parallelogram of our domain. We can run a national central road, through and through, the whole distance, under our flag and under our laws. Military reasons require us to make it: for troops and munitions must go there. Political reasons require us to make it: it will be a chain of union between the Atlantic and Mississippi States. Commercial reasons demand it from us: and here I touch a boundless field, dazzling and bewildering the imagination from its vastness and importance. The trade of the Pacific ocean, of the western coast of North America, and of eastern Asia, will all take its track: and not only for ourselves, but for

posterity. That trade of India which has been shifting its channels from the time of the Phœnicians to the present, is destined to shift once more, and to realize the grand idea of Columbus. The American road to India will also become the European track to that region. The European merchant, as well as the American, will fly across our continent on a straight line to China. The rich commerce of Asia will flow through our center. And where has that commerce ever flowed without carrying wealth and dominion with it? Look at its ancient channels, and the cities which it raised into kingdoms, and the populations which upon its treasures became resplendent in science, learning, and the arts. Tyre, Sidon, Balbec, Palmyra, Alexandria, among its ancient emporiums, attest the power of this commerce to enrich, to aggrandize, and to enlighten nations. Constantinople, in the middle ages, and in the time of the Crusades, was the wonder of western Europe: and all because she was then a thoroughfare of Asiatic commerce. Genoa and Venice, mere cities, in later time, became the match of kingdoms, and the envy of the kings, from the mere divided streams of this trade of which they became the thoroughfare. Lisbon had her great day, and Portugal her pre-eminence during the little while that the discovery of the Cape of Good Hope put her in communication with the East. Amsterdam, the city of a little territory rescued from the sea, and the Seven United Provinces, not equal in extent to one of our lesser States, became great in arms, in letters, in wealth, and in power; and all upon the East India trade. And, London, what makes her the commercial mistress of the world—what makes an island, no larger than one of our first class States, the mistress of possessions in the four quarters of the globe—a match for half of Europe—and dominant in Asia? What makes all this, or contributes most to make it, but this same Asiatic trade? In no instance has it failed to carry the nation or the people which possessed it, to the highest pinnacle of wealth and power, and with it the highest attainments of letters, arts, and sciences. And so will continue to be. An American road to India, through the heart of our country, will revive upon its line all the wonders of which we have read—and eclipse them. The western wilderness, from the Pacific to the Mississippi, will start into life under its touch. A long line of cities will grow up. Existing cities will take a new start. The state of the world calls for a new road to India, and it is our destiny to give it—the last and greatest. Let us act up to the greatness of the occasion, and show ourselves worthy of the extraordinary circumstances in which we are placed, by securing, while we can, an American road to India—central and national—for ourselves and our posterity—now, and hereafter, for thousands of years to come."

7. WHITNEY'S RAILROAD. The enterprising gentlemen at the head of this has, for five or six years, given it almost exclusive attention, and has perhaps more than any other man in the country illustrated the importance of a connection with the Pacific. He has explored personally a short portion of the route, and visited nearly every State in the Union, to induce their legislatures to co-operate. In this manner his outlay must have been very considerable. His proposition is to construct the road as a *private* enterprise, in consideration of a grant from Congress of thirty miles on each side of the road, from its *eastern* terminus at Lake Michigan to the *western* at the mouth of the Columbia, or at Puget's Sound, which is entered from the Straits of Fuca. Latterly, he has proposed a branch to the Bay of San Francisco. The sale of the lands, it is argued, will build the road in a period of about twenty years. The road after a certain period is to revert to the government.

The route projects from Lake Michigan, striking the Mississippi above the mouth of the Wisconsin, and six hundred and fifty miles *above* St. Louis; thence to the South Pass, 42°, and through the Columbia valley by Lewis's branch to the ocean. The Pass is seven thousand nine hundred and forty feet above the level of the Gulf. The mouth of the Kansas, on the route, is elevated seven hundred feet. In the next five hundred miles, an elevation of two thousand three hundred feet more must be attained, to Republican Fork; in the next one hundred and twenty-eight miles, the elevation climbed is one thousand and four feet; in the next one hundred and seven miles, nine hundred and sixty-three feet; in the next eighty miles, one thousand two hundred and eighty feet; the next eighteen miles, seven hundred and fifty-six feet, or forty-two feet to the mile; the next eighty nine miles to the Pass, two hundred and twenty-seven feet. We question if this road to the mountains be as good as those projected to the southward. From the mountains to the sea, the map we publish will show the elevation and depression on all the routes.

ESTIMATED COST OF ROAD.

Grading, bridging, &c., except bridges across the Mississippi and Missouri rivers, for 2630 miles, @ $5,000	$13,150,000
Bridges across Mississippi and Missouri	800,000
Superstructure, single track, depots, turn outs, &c., 2730 miles, @ $10,500	28,000,000
Engines, cars, &c., &c.	10,276,600
Contingencies	2,000,000
Repairs upon road until completed and before it can earn support	15,000,000
Total cost	$69,226,600

TIME OF TRAVEL.

From England to New York	10 days.
From New York to Pacific, 3000 miles by railroad	5 "
From Pacific coast to Chang-hai, the heart of Chinese commerce, 5400 miles	16 "
Total (in place of present sea voyages four and five months)	31 "

From New York to Australia	31 days.
" " " Manilla	24 "
" " " Java	25 "
" " " Singapore	27 "
" " " Calcutta	29 "

In reply to an attack from Professor Forshay, Mr. Whitney, in our Review for October, 1847, stated that a canal through the Nicaragua would save but four hundred and twenty-two miles in the passage from London to Valparaiso, whilst to Sidney there would be one thousand miles lost; to Canton, six hundred and eighteen; to Singapore, two thousand two hundred and twenty-eight, in comparison with present ship routes. He maintains that no southern pass exists in the mountains less than twelve thousand feet (clearly a great mistake); that a southern road to the Pacific must pass through soft bottom lands, over great streams, and countries subject to overflow, bad climates, &c. None of which is true, for some of the southern routes proposed, in any greater degree than for his own route. His objections to the navigation of the Ohio is well raised, if that river must be adopted as part of the line of travel; but this would not be necessary in a southern route. His position, that Charleston is nearer to China by his route than by a more central or southern one, is not fairly stated, since his own figures give,

Charleston to Pacific—Whitney's route,	2,919
" " Southern route,	2,261
Less distance	658

And this saving of six hundred and fifty-eight miles in length of railroad travel, will compensate for much more than the loss in steamship navigation upon the Pacific. Subject to this objection, we furnish his tabular estimates.

TABLE *of distances from principal Atlantic cities, etc., to Charleston, Vicksburg, Mazatlan, and to China, by the Southern route: also from Prairie du Chien, near the Mississippi, to Oregon, etc., etc., by the Northern route, with amount of differences, etc.*

	Southern Route.				Northern Route.			Diff. to Pacific.		
From	To Charleston.	To Vicksburg.	To Mazatlan.	To China.	To Du Chien.	To Oregon.	To China.	Favor S. Route.	Favor N. Route.	Diff. to China in favor N. Route
Charleston		771	2,261	10,661	1.097	2,912	8,319	658		2,342
Richmond	427	1,198	2,688	11,085	950	2,779	8,172	84		2.917
Washington	554	1,325	2,815	11,215	988	2,810	8,210		5	3,005
Baltimore	594	1,365	2.855	11.255	948	2,770	8.170		85	3,085
Philadelphia	709	1,480	2.970	11,770	1,041	2,863	8.263		107	3,570
New York	796	1,567	3.057	11,457	1,141	2,963	8.363		94	3,094
Boston	996	1,767	3,257	11,657	1,341	3,163	8,563		94	3,094
New Orleans		415	1,905	10,305	830	2.652	8,052	747		2,257
Louisville		1,001	2,491	10,891	430	2,252	7,652		239	3,239
Cincinnati		1,132	2,622	11,022	450	2,272	7,672		350	3,350
Wheeling		1,496	2,986	11,386	560	2,382	7,782		604	3,604
Pittsburg		1,588	3,078	11,478	610	2,432	7,832		646	3,646
Cleveland		1,732	3,223	11,622	517	2,339	7,739		883	3,883
Buffalo		1.863	3,353	11,755	803	2,625	8,025		728	3,730
Detroit		1,425	2,915	11,315	486	2.308	7,708		605	3,607
St. Louis		803	2.293	10,693	300	2.122	7,522		171	3,171
Alton		826	2,316	10,716	275	2,097	7,497		219	3,209
Galena		1,208	2.698	11.098	60	1,882	7,282		816	3,816
Chicago		1,070	2.560	10.960	210	2,032	7 432		528	3.528
Prairie du Chien		1,279	2,761	11,161		1,822	7,222		939	3 993

Mr. Whitney introduces testimony to prove the snows on his route are unimportant, prevail to but little depth, not every year, are dry and do not stand long; no greater cold than in New England, and no greater obstructions than upon the roads there. He argues that a southern route must necessarily earn dividends (a *non sequitur* always), and charge a rate of freight one cent per ton the mile against his *half cent.* Upon his estimates of one cent and half a cent is constructed a table,* which we have not space to give, but which shows a rate of freight varying from twenty-three to fifty-three dollars a ton to China, according to the route and the point of departure, or from one to two dollars the hundred weight.

8. MEMPHIS RAILROAD. By this we mean the road which our fellow-citizens of Tennessee and Arkansas are now advocating, and which

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* Mr. Whitney's objections to Mazatlan as a terminus, have greater weight than they could have to San Diego, or Francisco. The sailing time from these ports would be somewhat longer than from Columbia river (the coal depots need *not* be in Oregon), but this would be counterbalanced by other advantages.

they propose to submit to a convention of the south-western States. The road would leave the Arkansas shore, opposite Memphis, and strike across the country, perhaps to Van Buren, with branches to Little Rock, &c. From here it would follow the valley of the Arkansas river* and into the Indian Territory, along the Canadian branch of the same river. Having left the valley of the Canadian, the route would be almost due west to Santa Fe, should there be found a mountain pass that will answer, which is nearly in the same parallel of latitude as Memphis. We know with no exactness the distance from Memphis to Santa Fe, but suppose it would not exceed nine hundred miles, as there is little detour, which is about the distance between Santa Fe and St. Louis. Explorations upon this route, with the view of a railroad, have not yet been made, though the expeditions of Mr. Gregg and others have given us many interesting particulars.

From Santa Fe the route would be down the valley of the Del Norte, following to some extent, perhaps, that pursued by General Kearney and described by Major Emory, which crosses somewhere about the parallel of 34° latitude to the valley of the Gila, pursuing that river to the Colorado, near its mouth in the Californian Gulf, and thence across the country to San Diego.† The distance between Santa Fe and San Diego by the route indicated is also about nine hundred miles, making the whole distance from Memphis to the Pacific ocean *eighteen hundred miles.* Should San Francisco or Monterey be selected as the western terminus, the distance would be greater and would be measured to some extent through the as yet unexplored regions of the Utah Lake. The distance between San Diego and San Francisco is between four and five hundred miles, and the two harbors will thus compare:

"The PORT OF SAN DIEGO is the most southern in the territory of the United States, and is of considerable extent, being in fact an arm of the sea; in length ten miles and in width four miles; from being land-locked it is perfectly secure from all winds. The entrance is narrow and easily defended, and has a sufficient depth of water, twenty feet at lowest tides, for large vessels. The tide rises five feet. The tongue of kelp, three miles long by a quarter of a mile broad, off the entrance of the bay, must be avoided by large vessels, but small vessels may pass through it with a strong breeze. The bank has three fathoms water upon it. During gales, this kelp is torn up and driven into the bay, where it is troublesome to vessels by the pressure it brings upon them, either causing them to drag their anchors or part their cables. There are many drawbacks to this harbor; the want of water is one of them, the river which furnishes the Mission with water, disappears in the dry season before reaching the bay, and the surrounding country may be called a barren waste of sand hills. The town of San Diego, consisting of a few adobe houses, is situated on the north side of the bay on a sand-flat, two miles wide. The mission establishment is seven miles from the town, up a valley to the north-east, and here there is a good supply of water the year round. The river in the rainy season discharges a considerable quantity of water into the bay, bringing with it much sand, which has already formed a bar across False bay, rendering it useless; and well grounded fears may be entertained that it will eventually destroy this harbor also: this occurrence however may be prevented at slight cost. The whole country around San Diego is composed of volcanic sand and mud mixed with scoria: the land is unfit for cultivation, and filled with cacti, one of the many evidences of the poorness of the soil: this leaves the port of San Diego little to recommend it but the *uniform climate, good anchorage, and security from all winds.*"*

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* The inundated lands of Arkansas, five millions of acres, according to Mr. Borland's Report in the United States Senate, one-seventh of the State, can be readily reclaimed.

† Major Cook in 1846, left Santa Fe considerably to the north and pursued a route which he described as perfectly level, with the exception only of seventy-three miles. We have not his report before us.

The Bay of San Francisco is thirty miles in length by an average of six in width; a large portion of its southern, eastern and northern shores, are bordered by extensive and wide mud flats, preventing the landing at low water of even a boat; so much so that the eastern shore may be said to be inaccessible for a distance of thirty miles; and this impediment prevents it from ever becoming useful, except by the construction of extensive artificial works. * * * * * "These obstructions reduce this extensive bay very much in size, and it becomes still more reduced when the safety and convenience of vessels are taken into consideration; indeed, with the deep water, cross tides and exposed situations, there are but two safe anchorages, Yerba Buena and Sausalito. The former lies on the south of the entrance, between the island and town of the same name, and is but of small extent, with mud flats, bare at low water, to the channel; it is also very much exposed to the prevailing winds, which blow at times with great violence. It is the usual, but by no means the best, anchorage, and has but a scanty supply of water—not sufficient for the population of the town or the vessels that frequent it; this, added to the rocky point on which the town is situated, will prevent it from ever becoming the seat of trade. The population of the town exceeds five hundred inhabitants [several thousand now], and from its being nearer to the gold mines than Monterey, has become of late the most frequented. The bay of San Francisco is well adapted for a naval depot. or for a place for our whalers to recruit. Its possession insures to us the command of the northern Pacific and the protection of our large and extended interests there, but I know of no place where the natural site of a town can be found throughout the whole bay, and it appears to me extremely difficult to select one where the locality would permit of extensive artificial improvements."†

"The harbor of Monterey is said to resemble the beautiful bay of Naples. It has water and capacities for the combined ships and navies of the world. The winds here never blow home, and the anchorage, therefore, is perfectly safe."‡

Major Emory thus contrasts the two positions of San Francisco and San Diego: "At present San Diego is, all things considered, perhaps one of the best harbors on the coast from Callao to Puget's Sound, with a single exception, that of San Francisco. In the opinion of some intelligent navy officers, it is preferable even to this. The harbor of San Francisco has more water, but that of San Diego has a more uniform climate, better anchorage, and perfect security from winds in any direction. However, the commercial metropolis must be at San Francisco, owing to the greater extent and superiority of the country adjacent, watered by the rivers Sacramento and San Joaquin, *unless indeed, San Diego should be made the terminus of a railroad, leading by the route of the Gila to the Del Norte, and thence to the Mississippi and the Atlantic.*"*

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* Charles Wilkes's, Commandant of Exploring Expedition, Report to the National Institute, 1849. Captain Wilkes gives preference to the harbor at the mouth of the Columbia river; but it is said, on the authority of Lieut. Howison of the navy, the harbor has entirely changed since Wilkes examined it.

† Capt. Wilkes of "Exploring Expedition," &c.

‡ Maury's letter to Mr. King.

The route from Memphis to San Diego has yet been scarcely more than reconnoitered. Mr. Gregg, in his Commerce of the Prairies, describes a journey made by him, with laden wagons, from Van Buren, on the frontier of Arkansas, to Santa Fe, but with none of that minuteness which is indispensable in forming our judgment with regard to a railroad.† Major Emery's Report covers the ground from Santa Fe to the San Diego; but he, too, admits the hastiness of his notes, and that the best route was not always pursued. The purposes of that expedition besides were altogether *military*, and through an *enemy's* country, which prevented any closeness of observation. Col. Fremont, it is also understood, is now upon this line of exploration, or a part of it, with a view of facilitating the project of the St. Louis railroad. He designed crossing the south-eastern projection, or ridge of the Rocky Mountains, above Santa Fe and Spanish Peaks, and entering the valley of the Del Norte, trace that river to its source; he would then cross over the Rocky Mountains at some pass there to be discovered, and "survey his last line across the continent, complete his knowledge of the country between the Mississippi and the Pacific, and crown the labors of long explorations, by showing the country between the great river and the great sea to be inhabited by a civilized people, and practicable for a great road, and that on several lines, and which was the best." This exploration is one of the most important yet, and will be necessary before establishing any positive opinion in regard to a route to San Francisco from St. Louis, or indeed from any other point, through some other than the "South Pass," which is in a latititude fully five degrees further north than San Francisco or St. Louis. The government, too, it is said, are now about dispatching Captain Stansley into the Gila valley, and to the Great Utah Lake, by the valley of Arkansas, with the view of a full and complete exploration, occupying about eighteen months.*

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* Report of Major Emery, attached to Kearney's Expedition.

† There have appeared lately in the colums of the National Intelligencer, a series of ably written papers, signed "Opithloco," upon "Trade to China," in which eminent justice is done to the claims of southern cities, and the full advantages of eastern trade are enumerated. We extract a passage from the writer, in which he affords some interesting particulars of the route from *Memphis to the Pacific:* "Beginning on the west bank of the Mississippi, at Memphis, we will have nearly a perfect level over the alluvial lands to the bank of the St. Francis. In the construction of this part, it may be best and cheapest to place it on piles, five or six feet above the annual overflow. From the west bank of the St. Francis to White River will be over lands firm and above overflow; likewise from thence to the Arkansas, near Little Rock. It appears that Memphis is only about nine miles north of the 35th degree of north latitude, and Little Rock 24′ south; but by pursuing the course of the 35th degree, we would cross the Arkansas above the mouth, and would utterly avoid the Fourche de Fave pass, near to Daville, on Jean Creek; and in our due west course our route is parallel with this stream to its head, across the Portea River, a small stream that empties into the Arkansas. We will be thrown a few miles south of our direction, by a short bend in the Canadian Fork of the Arkansas. We are then on the plain between the Arkansas and Red River. We will not have a stream to obstruct our direct course until we arrive at the False Washita; by crossing this stream sixty miles north of where it flows into Red River, we will pass through the southern point of the great American desert, extending north three hundred miles, to the head of the Platte River, with no streams in our course until we reach the Rio Grande, about twenty miles south of Santa Fe—where, from its being near its head, is an inconsiderable stream. And in the lands which contain the precious metals in so great abundance as to attract a trade in wagons from Missouri for many years, grading the road will develop many of these mineral resources.

"From this stream (the Rio Grande), pursuing our direct course, we pass the heads of streams on each side, none of which approach so near as to cross, we arrive at the Colorado, which discharges its waters into the head of the Gulf of California—passing again near the southern extremity of the Great Sandy Desert, one hundred miles in length, stretching north-west, which would be impassable, but is thus fortunately placed out of our way. And in the further pursuit of our direct course, we arrive at the head of Tule River, which discharges its waters into the bay of San Francisco, the termination of the Pacific road. Directly on our left is the river which flows to Monterey. The road will probably be constructed on the plain between these rivers, and may, with scarcely any variation, touch Monterey in its course to San Francisco, which is destined to be one of the great cities of the United States of America, and is only one degree north of the course of our road."

The road from Memphis through Arkansas, Van Buren, and a great portion of the Indian Territory, judging from the nature of the lands through which it must pass, is of the most practicable character, and involving the smallest expense. The danger of overflow in Eastern Arkansas, can, without doubt, be obviated entirely, by proper levees, constructed in the north-eastern part of that state. Heavily timbered lands abound upon many parts of the route. Our facts are too meagre, however, to venture any precise calculation of obstructions and expense. We know that the Memphis convention, in 1846, pressed the completion of a military road to Fort Gibson, which, if fully explored, would give us all the facts that we want, to that point of the route. There are also good lands upon a great portion of the way, and to us it is perfectly clear, from all the facts we can gather, that the passage from Memphis to Santa Fe, presents, to say the least, no greater obstacles than that from St. Louis to the *South* or some other Pass in the mountains.

Mr. Gregg left Van Buren in 1839, with heavy wagons. He passed along the south or main fork of the Canadian branch of the Arkansas, which, near its sources, in the heights about Santa Fe, takes the name Colorado. He adhered closely to the river until the peaks of Angosturas were reached, when, for a short time, the valley of the Pecos was before him. 'For sixty miles before reaching these peaks or narrows, the party followed a plain road everywhere passable for wagons. Abrupt projecting routes, reaching even in height, 2,000 feet, added great risk to the passage of the narrows. A better road was however pointed out, passing near the *Cerro de Tucumcari*, a circular mound, visible to the southward. This, on examination, was found to be all that was desirable.

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* General Worth is on his way from San Antonio, Texas, by the route of El Paso, to the Gila valley.

It is to be regretted Mr. Gregg took no observations of the altitudes, &c., of the route. Reviewing the whole expedition he says:

"If we take a retrospective view of the country over which we traveled, we shall find but little that can ever present attractions to the agriculturist. Most of the low valleys of the Canadian, for a distance of five hundred miles, are too sandy or too marshy for cultivation, and the upland prairies are, in many places, but little else than sand hills. In some parts, it is true, they are firm and fertile, but wholly destitute of timber, with the exception of a diminutive branch of the *Cross Timbers*, which occupies a portion of the ridge between the Canadian and the North Fork. The Canadian river itself is still more bare of timber than the *Upper* Arkansas. In its whole course through the plains, there is but little except cotton wood, and that very scantily scattered along its banks; for some places for leagues together not a stick is to be seen. Except it be near the mountains, where the valleys are more fertile, it is only the narrow bottoms which skirt many of its tributary rivulets that indicate any amenity; some of these are rich and beautiful in the extreme, timbered with walnut, mulberry, oak, elm, hackberry, and occasionally cedar."*

Comparing the route to Santa Fe, through Arkansas, with that of Missouri, he remarks:

"As regards the two different routes to Santa Fe, although Missouri, for various reasons which it is needless to explain here, can doubtless retain the monopoly of the Santa Fe trade, the route from Arkansas possesses many advantages. Besides its being some days travel *shorter*, it is *less intersected with large streams*, there are *fewer sandy sketches, and a greater variety of wood-skirted brooks*, affording throughout the journey, very agreeable camping places. Also, the grass springs up nearly a month earlier than in Upper Missouri, * * * * for the rigorous winters of Missouri often prove fatal to the unacclimated Mexican animals, &c."†

We extract the following from the circular of the Fort Smith, Arkansas, "California Emigrating Company," which, however, like other documents of the sort, must always be taken with "many grains of allowance."

"The route up the north fork of the Canadian River, as laid down by Mr. Josiah Gregg, in his '*Commerce of the Prairies*,' and lately traveled by a detachment of United States dragoons, under the command of Lieutenant Buford, to Santa Fe, leaving Santa Fe, however, to the north some distance, and going near Albuquerque, immediately to El Paso, and perhaps take the route traveled by Major Cook, United States army, in the year 1846. This road he describes, in a letter to Col. Abert, as being comparatively level, and the water and range good, with only a single exception of a distance of 75 miles. The whole distance from Memphis to the Pacific is estimated by Lieut Maury, of the United States navy, to be 1,500 miles; and Fort Smith being 300 miles nearer, the distance will be, according to his estimate, only 1,200 miles: but as a straight road has not yet been laid out, we cannot give any correct estimate of the distance from this point to the Pacific. However, we feel certain the distance is much nearer than was at first anticipated. Wagons can travel on this route with ease and safety, the plains being so large, the ground over which the company will have to pass can be selected, and bad places thereby avoided. Two hundred miles of this route is a plain wagon road; and for that distance provisions and forage can be purchased at very reasonable prices. It is supposed that the company will arrive at the point of destination in 80 or 100 days from the time of starting. We would here remark, that an excellent guide, one well acquainted with the country, and can speak the Comanche and other Indian languages, will accompany the expedition."

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* Gregg's Commerce of Prairies, vol. II, 154: but what other route has any advantage in timber over this?

† Gregg's Commerce of Prairies, vol. II, 55.

We have constructed, with some considerable pains and labor, from all the various explorations west of the Rocky Mountains, and charts, a diagram,* representing,

1. The nature of the route and its elevations, selected by Mr. Whitney, after the Notes of Fremont, between the South Pass and the mouth of the Columbia.
2. Route, &c., from South Pass to San Francisco. (Fremont's.)
3. Route, &c., from Santa Fe, or Passo del Norte, 200 miles south of Santa Fe, to San Diego. (Emory's.)

On inspection of the profile view of the three proposed routes, in the construction of which, we were aided by our scientific friend C. W. Sears, Esq., of this city, it is evident that the one from St. Louis to San Francisco, by the South Pass, framed upon the very latest map of Col. Fremont, 1848, is so mountainous as to be almost impracticable. The route to the mouth of the Columbia is as bad, if not worse, whilst that from Santa Fe or the vicinity, to San Diego, by the valley of the Gila, is a most beautiful one, presenting but in a small portion any serious obstruction. The profile views are made with great care from actual surveys by government engineers; but these surveys are not as perfect by any means as they should be. They yet indicate very much. From the vicinities of the Del Norte, another route is suggested by Mr. Leroux, to the southward of the Gila, and intersecting that river at a considerable distance from its source; the road is supposed to be good—through an open prairie—if water can be had. It deserves exploration.

We could easily show that there are no grades on the San Diego route too considerable to be overcome by the present construction of railroads, even without inclined plains. This we may show hereafter. But it is remarkable, at this very period, two important inventions and patents are noted by the press, by James S. French, of Virginia; the one a brake for stopping an engine and cars almost instantly; the other for the easy ascent of any grades, without the use of inclined plains or leveling. A railroad may be laid down over the ordinary undulations of the earth, like a turnpike road, and engines and cars be so constructed that they can go over it with safety. To accomplish this object, the invention enables the engineer, by mechanical means, to supply any degree of adhesion which may be required, at any instant, and to dispense with it the moment he ceases to need it. And to do this, there are no rack-rails, or cog-wheels, or center rail; nor is there, by this plan, any such resistance to the progress of the train as would be caused by adding weight to the engine, in order to produce the requisite adhesion.

Having now gone over the entire field of projections, it is full time to pass to some general observations. A few points we think abundantly evident, from the facts that have been introduced and from those that are readily suggested:

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* See Frontispiece.

1. That no connection or line of intercourse between the Atlantic and Pacific Oceans is likely to be popular among us, or succeed, which does not pass through and intersect in its *whole* extent *our own territory.* All others depend too much upon the wills and caprices and jealousies of foreigners, which may at any moment put an end to the enterprise. Besides, such *foreign* roads do not, to the same extent, benefit and extend our own population, and conduct their persons and their property from location to location in the march of western empire. Any such roads adopted by us must be *temporary;* and with reference to canals, the great facts stand out, that the sailing distance to the east must yet be very vast, supposing them constructed; that their construction involves as enormous outlay, all things considered, as some central rail road; that if undertaken by a single nation, the jealousies of others would be excited, and no union of nations on the subject could be expected, from the almost impossibility of keeping such a canal *neutral.*

2. That if a great rail road be constructed through the possessions of the United States to the Pacific, that road *must be as nearly as can be* CENTRAL, to enlist the sympathies, regards, and co-operation of *all sections of the confederacy.* No city or town can set up a special claim. The object is NATIONAL, and the American people should speak. Hence the rivalries of the Lakes, St. Louis, Memphis, Natchez and Galveston, would be preposterous and *defeat* the best concerted scheme of either. Nor only must the road be *central* to command a sufficient support ever to start or construct it, or make it afterward prosperous, but it must be *upon such a line and to such a port* as shall be clearly established to be the *best,* all things considered. In such a spirit, difficulties and obstructions sink down into insignificance. The facts are yet not all before us that we may pronounce *authoritatively* and *decisively* which is that line and that route.

There are yet reasons and facts sufficiently cogent to determine our decided *preference,* in the present state of information on the subject, for the *Memphis terminus,* upon the Mississippi, and these we will concisely state.

1. This route to the Pacific, whether at San Diego or San Francisco, equally good harbors, at least if the former be not the best, to leave Monterey out of the question, is as short, *very nearly* as any other American route proposed—much shorter than the road to St. Louis—many hundred miles less than that proposed by Mr. Whitney.

2. The Memphis road is more nearly in the *center* of the continent (Natchez being that point longitudinally*), is nearer the mouth of the Ohio, nearer the Atlantic Ocean, is at a point *always* navigable, and is as easy of communication with every other section of the Union, as (we maintain *much easier* than) any other road.

3. The route from Memphis is *at least as good,* we believe *better,* than any other, so far as the face of the country and obstructions are concerned. It is not so far *south* as to be within the regions of sultry

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* Dr. Cartwright. We have it on other authority, that the lines drawn through the extremities of Maine and Texas, Florida and Iowa, intersect each other at *Memphis.*

suns and disease, nor yet so far *north* as to be among continued snow and ice, but is through a temperate, and, for a large part, most salubrious climate.

4. It is at a point where the *Mississippi is always navigable.*

Notwithstanding this *preference*, however, convince us of a better *American route* and we yield. More full and perfect surveys may fix us in our prepossessions or altogether destroy them. Let us have the surveys *at once.* In the spirit of compromise between the North and the South and the West, should rivalries arise, they might perhaps only be silenced by the selection of a *terminus* at some point *opposite the mouth of the Ohio River*, supposing that surveys should establish its equal practicability.

For ourselves, we declare for the road—the road as early as possible—the road over the best route, and with the best *terminii*—the road most calculated to subserve the purposes of the *whole union*—and we do not intend that any idle preferences or prejudices, or worse still, any discreditable and unpatriotic rivalries shall attract us to the right or the left in the pursuit of this great and stupendous enterprise, which shall mark an epoch in the history of mankind. Here indeed the object is *our country*, and MAN.

Stupendous as appears this proposed enterprise, there is nothing in it at all impracticable. For a nation so extraordinary as ours, the *fiat* has only to go forth, and the *deed is done!*

We say not, nor pretend to say, how this road shall be built; whether, as Mr. Whitney proposes, by a grant of the land on either side to a *private company*, making of them the greatest, the wealthiest, and perhaps the most dangerous corporation in the world; or, as Mr. Benton would have it, by government appropriations and government officers, thus fearfully increasing executive patronage, and leaping at once headlong into a system of such prodigious expenditures for *internal improvements*, by the Federal Government, as shall in a few years make it lose the *federal* character altogether and become, unless some checks can be devised, one of the most powerful and irresistible *centralisms* on earth—or yet by *State* appropriations and action *conjointly with individuals*, as Mr. Calhoun perhaps would have it, or as economy and expedition might demand, since government ever pays *much* and gets *little*, if indeed the means of States and individuals are adequate to the purpose. We express not an opinion here. Concert of action, counsel, deliberation, are required. Wise heads must be called upon to pronounce. We see difficulties, vast difficulties in either or any view, but *our faith in the road, and the road at once, is unshaken.*

It is demanded by our *wants.* Would we be without this great link to bind together our continent, extend our pressing population, fill up our interior valleys and vast wilderness with an enterprising people, secure our defenses by land and water, and bring together our merchants and manufacturers from every part of the continent in common marts?

We want the road to develop our *mineral resources*, which appear to be inexhaustible. We know not yet the treasures which are beyond the Rocky Mountains. We have found virgin gold in quantities to bewilder our imaginations and astound our judgments, yet we know scarcely any thing yet of the country. Are there other precious metals?

Is there iron? is there coal? which have enriched Pennsylvania and given rise to her public works, the most extensive in the Union.* We know that the quantity of salt is altogether inexhaustible on the route; and is this article so valueless that it will not bear a transportation two or three times as great only as is borne by the coal of Pennsylvania?

We want the road, finally, to complete for us that *commercial Empire* after which we have sighed—which has been indicated for us in every step of our progress, from the landing of the Pilgrim Fathers, and which appears to be *ours* by a manifest and inevitable destiny. *Shall we not then have it?*

To be sure there are some fifteen hundred, or, it may even be, two thousand miles of country to be traversed over—a thousand miles of howling wilderness—mountains, hills and valleys and rivers—all of that! Sixty, or perhaps one hundred million of dollars must be expended and lie for a time without income—*even so.* But what is *two thousand miles* of railroad to the American people, and what is a *hundred millions of dollars?*

Twenty years ago there was not in the United States a single locomotive engine in successful operation. Our first railroad was not completed until 1825, and it was not until October, 1829, that the empire of *steam* was established upon our shores. In that twenty years what events! Every State and section of this vast republic are already penetrated and traversed by the magic power it engenders. The number of miles of railroad already constructed and in operation, is *six thousand four hundred and twenty-one*, over one thousand miles of which center at a single city, Boston, having cost $49,221,400, and earning clear of all expenses in 1848, $2,678,745. These American roads have varied in cost from 8 to $60,000† per mile, or assuming an average of $30,000: the total amount expended on railroads among us during the *first twenty years* of their existence, is about *two hundred millions of dollars.*

We begun these railroad enterprises with 13,000,000 of inhabitants, we have now 22,000,000. We begun them with 1,700,000 square miles of territory, we have now 3,000,000 miles; we begun with an annual industrial revenue, which has increased in a much larger proportion than our population; and we set out upon the career of the *twenty years to come* with an entire familiarity with the business of railroads in every point, and with such facilities and improvements and reductions in cost‡ as no human being twenty years since could have foreseen. Shall the future, then, be staggered by this project of a railroad *only one-third* as long as the past has already built, more than one-half *less expensive* and *one-fifth part in extent* of the railroads which have been projected, according to Dr. Lardner, in the various States of the Union for future construction?

When the first American road was constructed, "*twenty tons* on a level road at *ten miles an hour*," was the extent of the requirements of those who were in advance of the age in these matters. And even this degree of confidence in their power was confined to a very few persons in England, while in all Europe besides, and with here and there an exception in this country, they were as little thought of as the magnetic telegraph in 1840! And yet at this date a locomotive, even of American manufacture, which will haul from a *thousand* to *twelve hundred tons* on a level road at the same speed, is no uncommon thing."* There is yet existant that recklessness, we would say that *insolence*, of opinion, which would set itself up in judgment here, and determine, as it did twenty years ago, the acme of progress is reached, and your schemes of railroad extension are visionary and impracticable! There is a modesty in true science which almost reaches to the *faith* of Tertullian: "this is impossible, it is therefore true," for who is it that shall determine the *impossible?* Those who *think* ever find it easy to *conclude.*

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* Lieut. Maury, in his letter to Mr. King, says that Lieut. Minor, of the Navy, who was Governor of San Diego, informed him of having found bituminous coal in the Solidad valley, about six miles from the port. He found it on the surface, and used it in the forge, though it was impregnated with sulphur.

† The Boston and Lowell cost $68,196 per mile. Reading railroad, Pennsylvania, much more.

‡ The average price of iron alone in bars, at Liverpool, has fallen from £14 per ton, in 1825, to £5.5 in 1819.

What have other nations done in the progress of railroad extension? England in thirty years, has built and set in operation 3549 miles of railroad, costing $550,706,802. In 1845, there was 4000 additional miles chartered, at a computed cost of very nearly as much more, making, together, a railroad investment of $1,000,000,000! A single one of her roads, the *North Western*, is 428 miles long, and cost $104,114,633. Has Britain so got the start of us, who have nearly equalled her in population, that she must bear the palm of great deeds forever alone?

France had, in 1846, 1000 miles of railroad—Belgium 348—Austrian Dominions 1935 miles—Prussia 700 miles—all Germany in construction 7600 miles, in operation 4760 miles. *Nine* or *ten thousand miles of* railroad built upon the continent!

Even Russia, despotic Russia, is on her way from St. Petersburg to Warsaw and Cracow—to Moscow—to Odessa, to connect the Volga and the Duna: these are all stupendous works.

The following table, from a late number of the Railroad Journal, will show all the railroads *in operation* in Europe and America, and their cost.

	Miles.	Cost per mile to Jan. 4, '49.	Total.
United States	6,421	$30,000	$ 192,630,000
Canada	54	30,000	1,620,000
Cuba	250	38,000	7,000,000
Total in America	6,725		$200,250,000
United Kingdom,	4,420	145,000	640,900,000
France	1,250	110,000	137.500,000
Germany	3,370	50,000	168.500,000
Belgium	495½	80,000	39.640,000
Holland	162½	25,000	4.062,500
Denmark and Holstein	282	40,000	11,280,000
Switzerland	78	50,000	3,600,000
Italy	162½	90,000	14.625.000
Russia,	113	60,000	6,780.000
Poland	187½	50,000	9,375,000
Hungary	157	50,000	7,850,000
Total in Europe	10.678		$1,044,402.500
Total	17.403		$1,244.662 500

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* American Railroad Journal.

If we ask, what has been attained in regard to *speed?* When Mr. Stephenson asserted in England, *twelve miles an hour* might be attained, he was hooted—it has reached now forty-seven and five-tenths miles, and we understand, more lately, even as high as *sixty miles* an hour on the Great Western road in England. A scientific man (Dr. Lardner) would not undertake to fix a limit *short of two hundred miles an hour.*

If we ask in regard to *economy* of travel and freight? The Erie Railroad, eighty-seven miles in length, transports its passengers at one and seventy-two tenths of a cent per mile, and the Providence Railroad established its rates, a few years ago, at *one cent per mile.* Coal is transported in Pennsylvania, at the rate, we learn, of *one cent per ton* per mile, and the average freight upon New England roads is less than two cents. Compared with any other mode of travel, where can competition arise? The British railroads carry *bale* goods at two pence per ton per mile, and twenty miles an hour! Some of the best of our roads have declared over ten per cent. annual dividends, whilst those of Europe have gone as high as twelve and a quarter per cent., and in England 4.24 per cent. was declared upon a gross receipt in 1848 of forty-seven millions of dollars on all the lines.

If we ask in regard to *safety?* Dr. Overton, of Nashville, stated in 1845, that upward of forty-four millions of people had traveled over the different railways in Great Britain, in five years, *with the loss of only ten lives.* In Paris, in 1844, one million eight hundred and eighty-nine thousand seven hundred and eighteen had traveled *without a single person being injured,* whilst in the same period there were nine killed and two hundred and eighty-three wounded by the common road-carriages! In our own country, however, from greater recklessness, the accidents have been much greater, though, out of seventeen millions of passengers transported on the Massachusetts railroads, in 1846-7-8, the whole number of fatal accidents were one hundred and eight (twenty-four only being passengers), being *about six in every million!* We question, too, if this is not greatly higher than the average from year to year.

Should we falter, then? For as it is sufficient that Great Britain has built a *single road,* costing *one hundred millions of dollars,* as much as is required for a road across our continent, and that the statistics of our own country, as carefully collected by our public officers at Washington, show an *annual income,* realized from all branches of industry among us, amounting to *two thousand millions of dollars.** If we were to build the road in ten years, not perhaps an impossibility, and the income of the nation were not augmented, an utter impossibility, the amount annually expended on the road would be ten millions of dollars, or *one-half of one per cent.* of the whole annual *income* of the country!

Our public works, we mean of the states, and cities, and government, have already cost perhaps five hundred millions of dollars. We pay in taxes, state and federal, &c., sixty or seventy millions annually, and expend, now and then, when the humor seizes us, one hundred millions of dollars in a single year, and on a single war. What of these things! The credit of the American nation was never so high before, and wealth and prosperity never so universal among us.

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* Patent Office Report, 1848.

We all know the extraordinary stimulus which was given to British industry, and the prodigious strides that were made by that empire when the wars of Napoleon were causing her an expenditure of one hundred and fifty millions of dollars a year over and above her vast and over-taxed revenues, and in twenty years an expenditure of three thousand millions, all of it raised among her citizens.

The Romans constructed fourteen thousand miles of road, a single one of four thousand miles, many of stones and rocks joined with great care, which remain sound to our day; they had, and we find among their ruins, acqueducts bringing water through rocks and mountains for sixty miles, over valleys raised upon immense arcades of stone, and supporting large canals. The Egyptians, for vain purposes, could construct prodigious pyramids, obelisks, and statues, sometimes elevating single stones of seventy feet square. The Babylonians had their hanging gardens and great wall—the French built the great Semplon road across the Alps—the British cut a tunnel *under the Thames*, floating with all its navies—the Chinese put up a GREAT WALL to protect their empire, fifteen hundred miles long, carried over the highest mountains, through the deepest valleys, and continued by bridges over rivers, fifteen to thirty feet in height, with a breadth of fifteen feet at the top, of masonry, with square towers at short intervals thirty-seven feet high! They build a great canal of six hundred and fifty miles! Even the ancient Americans, if Montaigne can be credited, had a road from Quito to Cuzco, nine hundred miles long, twenty-five paces broad, *made of stones ten feet square.* In fact, there are ruins all over our country of stupendous ancient works, that might perhaps make our Pacific railroad itself blush.

Build the road, then—it is for *us*, and not for our children—it is within our easy effort—it is most promising in results—it will create, as it goes along, the trade which shall sustain it, and will even carry with it, from station to station, the timber, foundations, and supports, which it requires, from the forests to the prairies, like man himself, in his progress through the wilderness, laden with the material which is to nourish and sustain him.*

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* Many roads in our country have already done this. How many villages do we find springing up all along our railroads, and what an extent of country do they bring into cultivation. The amount of trade between any two points is always vastly enhanced by them.

The trade of Santa Fe, in its present discouragements, amounts to perhaps nearly one million of dollars per annum both ways, for the supply of Chihuahua and the other neighboring provinces. The cost of freight is full twenty to twenty-five dollars per hundred pounds. With a reduction of this freight to one dollar the hundred weight, what extension of the New Mexican trade may be contemplated!

It will cost the fifty thousand passengers, who are going to California, two hundred dollars each—ten millions of dollars. If, in twenty years time, that number of persons were to pass and repass from the United States, or the one-half of them, we should have from this source, from the road alone, several millions of dollars.

Five millions of dollars clear of working expenses, which in New England are estimated at fifty-four per cent. of gross income, would be five per cent. on the cost of road—a good dividend. To do this, the gross income must be ten millions

If we can suppose a population on the route of this communication, and in constant use of it, of four millions only, and that it will reach the number in twenty years would not seem improbable, considering the riches of California and the past progress of our western country, and the impetus the road itself would give, *that population alone would support the road*, with its travel and trade, judging from the number of miles of railways we at present require.

Thus, then, if not one dollar of eastern trade is realized by our Pacific railroad, if begun now, it is capable, in less than one generation, of being as profitable as other American roads!

Demonstrate, if it can be done, that we get the trade of India, or even make it *highly probable*, and what motives are there superinduced to gratify national avarice or ambition.

We call upon the Memphis Convention, then, to act with energy and promptness. Other routes are pressing, and their partizans are sleepless. Some of them have the advantages of surveys in progress. Col. Fremont is engaged upon the St. Louis route. Let the city of Memphis, and the neighboring towns of Arkansas, make a contribution for an immediate survey—a few thousand dollars will be sufficient. Let an engineer be appointed, who shall start at once, say in August, over the route as far as the Pacific at San Diego. A company of eight or ten can easily be procured to accompany him, at slight expense. They can reach San Diego in time, after a reconnoisance, for a report to reach the United States in time to influence the action of the very next Congress—say in January or February next. We believe this perfectly practicable, and that the necessary funds could be raised. Reliance in this emergency should not be placed upon explorations to be sent out by government, which are too tedious.

As a Southron, we confess a deep and abiding interest in these schemes to connect the two oceans. Our own cities must revive under their influence, and commerce visit again and rule in her wonted marts.

We have Richmond and Charleston and Savannah, Mobile and New Orleans. Why has the progress of all of these, save the last, been unnaturally checked? Why has Charleston, which, near the close of the last century, doubled New York in the extent of its commerce, fallen so infinitely behind? The operation of our federal system has built up New York, and centered in it nearly all the foreign trade of this nation, which is conducted with the produce of southern climes.

Will men tell us that our slavery* has been the retarding cause, when it is known to all the world that whatever of products this nation has sent abroad and used in her commerce, until within a year or two, have been the *exclusive creation of this very slave labor?* The sweat of the African and the bondman has as much built up the granite fac-

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of dollars. One hundred and fifty thousand passengers using the road, in whole or in part, for *travel* backward and forward, to Santa Fe, New Mexico, California, Oregon, India, South America, from the United States or from Europe, at sixty dollars each, would give this amount?

* We trust our readers will all procure and study the able lecture of Elwood Fisher, of Cincinnati, in which he refutes this calumny, and vindicates for the South a high social, political, and industrial condition, for which her citizens need not blush. We shall have more to say about this lecture hereafter.

tories and palaces of New England, and ordered her thousand railroad routes, as it has harvested the rice fields of Carolina, nurtured the cotton of Mississippi, or crushed the cane of Louisiana.

Are southern climates unfavorable to enterprise and trade? Has the South ever been backward in contributing her quota of great minds, and working minds, in every department of our country, in peace or in war? Antiquity refutes the libel, that southern latitudes are not fitted for extensive commerce. The empires of Assyria, Egypt, Media, Persia, and Arabia were *southern*. All civilization has come from the *south*—the Greeks and the Romans were *southerners*. Venice was a *southern* city. Were not all the *southern* Indian tribes of America, at the discovery, more advanced in civilization than the northern—Mexicans, Peruvians, Natchez?

And what shall be said of MOBILE, our neighbor city, which is even now projecting a railroad to take her, perhaps, five hundred miles, to the mouth of the Ohio; and what of NEW ORLEANS, the emporium of a dozen states, and of as many more to be formed, we trust, in the future—a city more strictly *commercial*, perhaps, than any other upon the face of the earth—which has sprung up, as it were, among the marshes of the Mississippi, an infant Hercules, feeding, growing, and enlarging upon TRADE, and incapable of a single breath without the workings of its great arteries—stretching out its broad arms and drawing in the wealth, resources, and power of an empire—challenging, in its march to greatness, and threatening to outstrip, every other commercial mart upon the continent.

Yes, we can build up again *southern* marts, and that when the continent is "bridged" by a railway track, connecting with Charleston and Savannah and Mobile—for these cities have all routes in progress to the Mississippi—and with New Orleans by the unrivalled navigation of the lower Mississippi, the cheapest and the best navigation in the world. Then shall the destinies of New Orleans be fulfilled; and, commanding the Gulf of Mexico, she shall go out to trade in eastern products, having for her exclusive markets, the West Indies, Mexico, and South America, and a common interest in the commerce of all other countries.

This period may be distant; but it will come if we do our duty—do it manfully to ourselves and to our posterity—regarding the perpetuity and power of our glorious confederacy, but not unmindful—no, not for a single instant, though traitors assail—or recreant to OUR OWN HEARTHS AND HOMESTEADS, and THE SACRED INHERITANCES OF OUR FATHERS.[*]

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[*] The following extract from the letter of a distinguished friend, is commended to our readers for their consideration. The author is one of the best informed men in matters of this kind, one of the ablest reasoners, and, withal, is as well known as almost any man in our country.

"You know my views as to the claims of Memphis; Memphis and St. Louis are now the rivals for the eastern terminus. Suppose the route from each place should be found equally practicable, let us see how the case would stand. Virginia might go for Memphis; North Carolina would be lukewarm; South Carolina, Georgia and the seven other southern states, including Texas and Tennessee, would be all most unanimous—eleven states. Kentucky and Maryland we will call doubtful, though I rather think they would be most in favor of St. Louis. Ohio, Indiana, Illinois, and all to the north, would go for St. Louis; so would the eastern states, and all the free states; for I can tell you that the accursed question of slavery is already mixing itself up with the road, and the free states, who are removed from

ART. II.—MISSISSIPPI.

A SKETCH OF THE GENERAL CHARACTER, AS TO SOIL, CLIMATE, PRODUCTIONS, &c., EMIGRATION, PROSPECTS, &c., OF MISSISSIPPI.

To a Journal devoted to the interests of the Valley of the West, matter touching any portion of it, I trust, will be acceptable. To an observer of the present day, indeed, it is somewhat strange that this section of country did not earlier attract the examination of the enterprising to the many points of interest to be found in its bosom, as well as the research of literary labor in regard to its earlier history. Surely it is a theme, in all its bearings, worthy of the attention of our ablest and wisest. The philosophic Frenchman, De Tocqueville, writing of our country, says: "The Valley of the Mississippi is, upon the whole, the most magnificent dwelling-place prepared by God for man's abode." And, in speaking of the Atlantic States, he says again, that, "the center of power still remains there, whilst, in the backward States, the true elements of the great people, to whom the future control of the continent belongs, are secretly springing up." Scarce fifteen years have elapsed since the above was penned by a sagacious foreigner, yet they have served far more than to fulfill his remarkable prediction. And here I might say much on this, which would be alien to the purposes of this brief article. As to the truth of it, it sufficeth that there is no more pertinent evidence needed for the moment, than the establishment and success of the "Commercial Review of the South and West," located at the great seat of their trade and power, and devoted to the complex and mighty interests growing up in their midst. May it continue to prosper, and remain worthy of the important duties it has assumed.*

Among the fair sisterhood of States, so beautifully traced out on the bosom of the great Valley of the West, there is none more interesting than the State of Mississippi, bearing, as it does, the name of their common boast, the Father of the American waters. Though among the first of the Western States admitted into the Union, Mississippi seems only for a brief period to have attracted much of the general attention. During the prevalence of the great land speculations, which are a part of the history of the West, its southern portion came fully into market,

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it, will not go for it if it is to go through slave territory. Opposition, it will have, from New York and Massachusetts both, on these grounds. Now suppose we say about the mouth of the Ohio river for the terminus; we get Kentucky, Maryland, Pennsylvania, Ohio, Indiana, Illinois, and in addition to the others to the south. These states can carry it, and the south, if it cannot get it as low down as it would have it, must, nevertheless, get it as low down as it can.

"I do not wish to give the question this turn, but I think it wise to look things in the face.

"I make these suggestions to you, not because I mean that you should quote me for father, or speak of it, but because you asked me for my views upon a subject that is nearest to my heart, and because I think it wise for southern people to have their eyes about them; and, above all, because I think the convention should not, in the present meager state of information as to routes, commit their constituents to any *particular* route."

* The writer's compliment is acknowledged; but, alas! the "success" of the "Commercial Review" has not been as eminent as he supposed, in the past, whatever may be the hopes of the future.—ED.

and, some years later, similar scenes were re-enacted at the sale of that fine tract of country in the northern part of the State, known as the "Chickasaw session." After the disposition of the greater part of the public domain, at these sales, interest seems to have subsided as to the State, and to have turned aside in the pursuit after the rich loam of Louisiana, the new regions of Arkansas, and the varied expanse of the young republic of Texas. Among the many causes which might be assigned for the comparative neglect into which the State seems then to have fallen, I will mention only one. It is a conceded point, I believe, that our western land sales were at the same time the cause, as well as the *nucleus*, of much reckless speculation, in which *bona fide* settlers could not participate, and which was managed and governed by gambling traders from all quarters of the United States. The State banks of the time, managed as they then were, furnished the food in this headlong race after fortune. Without a further waste of words, we have here the cause and the course of some of the most remarkable events in the private financial history of our people in the West. No land sales presented a higher degree of excitement, or more gigantic schemes of speculation, than in Mississippi. No State plunged with a bolder leap into the corrupt banking system of the times, and nowhere did more disastrous consequences follow in the train of either. The monopoly of large bodies of the public lands in the hands of a few, to the exclusion of the great mass of the people, and the profits of gambling, instead of the regular returns of honest industry, were the legitimate results of the one and the other. In the crash of 1836, '7, '8, and '9, an almost universal bankruptcy ensued amongst us, and some of the finest portions of Mississippi became partially depopulated. Then, in the breaking up of our miserable banking system, many unhappy consequences followed, the baleful effects of which have pursued the State, kept down its natural growth and prosperity, and are yet seen, and daily felt, in our courts of justice and our halls of legislation. The effects of these causes (proceeding from whence they may, for I will not undertake to say *here*) are very obvious. They have greatly impeded our increase in population; turned away from us the goodly tide of eastern emigration, and thus crippled the revenue, resources, and power of the State. In speculative schemes, the agricultural interests have been grievously neglected, and, in its infancy, our rich virgin soil has been squandered and exhausted. I will not dwell upon the abusing effects of this race after gold, on the intellectual growth and character. It is to be seen amongst us; and there are many, rarely and nobly gifted, who look with vain regret on labors expended in the race for speculation and money, which, if properly directed, would have made them useful to their country, an ornament of general society, an honor to their State, and enabled them to have left to their children a lofty heritage of fame. Lastly, from peculiar causes, the confidence of our sister States in our general policy and system of laws, was entirely destroyed. But a great change has taken place. The old Regime of Mississippi has passed away, and better times, I hope, are ahead of us. Our lands are now in the hands of earnest cultivators. The banking system is no more, and but one diminutive member of the tribe is left to remind us of the days of the "olden time." The laws and legislation of the State have become permanent and settled. We have, at last gone through the fiery ordeal; credit and confidence have been restored, and the present population of Mississippi is almost unindebted. Our State is once more attracting the share of public attention to which her many natural advantages so richly entitle her. To these it is my present intention briefly to call the notice of your readers.

The State is comparatively small. It yet presents a great variety of soil, and is divided into many different districts. The upper portion of the State is generally known as North Mississippi, though the region thus designated includes a portion only of the North. This section of the State came into market and cultivation some twelve or fifteen years ago. The surface of the ground is rather rolling, but generally it is very clean—has an open, champaign appearance, and is beautifully wooded with oak, hickory, &c., devoid of undergrowth. The uplands produce very abundantly for a year or two, when they are apt to be ruined by heavy rains, the substratum of the country being sandy. The valley lands, as they are termed, are much more durable, the soil being heavier and darker, and are highly productive; but they are liable to be, and are frequently, submerged, acres at a time, under billows of sand washed from the uplands during the heavy freshets. Cotton has hitherto been the chief product; but as the soil is becoming exhausted, and the country colder from being more open, its cultivation will probably be in some degree abandoned, and attention given to lighter crops. It is considered a healthy country. The water, what there is of it, is very good; yet it cannot be said to be well watered. There is a small creek, called Cold Water, in its borders, and the Tallahatchee River makes from it. But for the scarcity of water, I presume it would be a good stock country, and also proper for the raising of small grains. The chief outlet of this region is by wagons, to Memphis, Tennessee, which town it may be said almost to have built. Before the Chicakasaw Cession came into cultivation, it was a muddy village, and since, in a few years, through its wagon, grocery, and cotton trade, it has sprung into the fair and stately city, which now salutes the eye of the traveler from the brow of the ancient Chickasaw Bluff.

The settling of this region is one among the many remarkable events in the history of the rise of the Western States. Fifteen years ago it was an Indian wilderness, and now it has reached and passed, in its population, other portions of the State of ten times its age; and this population, too, one of the finest in all the West. Great attention has been given to schools and education, and here has been located "the University of Mississippi," so amply endowed by the State, and now just going into operation, under the auspices of some of the most able professors from the eastern colleges. There is no overgrown wealth among them, and yet no squalid poverty; the people being generally comfortable, substantial, and independent farmers. Considering its climate, soil, health, and general character of its inhabitants, I should think no more desirable or delightful residence could be found, than among the hills and sunny valleys of the Chickasaw Cession.

Another section of North Mississippi is called the "Prairie," or "Tombigbee," country, commencing in the extreme county of Itawamba, covering the north-east part of the State, and sweeping far down on the Alabama line. The country is uniformly level; presents an almost unbroken flat, with scarcely a tree; covered by rank grass; dotted sometimes with pools and marshes, and intersected by dull, sluggish branches. The soil is a dark, heavy loam, coal black, and of surprising strength and fertility. The dirt is different from that of lower Louisiana in this, that it is more of an original, and less of a depositary, character; and also in being thick and highly adhesive, instead of light and *ashy*, as the former. It is also corrosive, and deeply impregnated with lime. The soil is a strong one, and certainly inexhaustible. The crop is, and ever will be, cotton—of which the yield is abundant, when the rank grass of the prairie is overcome by cultivation, and the cotton is not ruined by the diseases incident to the strong nature of the soil. The black mud becomes excessively disagreeable in wet weather, and the rains are very heavy, and render transportation through the country, as well as its cultivation, very laborious. The yield of corn is luxuriant and abundant.

This region, though lying by the Chickasaw counties, finds its market at Mobile, by means of the Tombigbee river principally; a fine stream, and navigable for good boats seven months of the year. The head of its navigation is Aberdeen, a thriving town in Monroe county, sprung up in a few years, and already a place of very heavy trade; the third shipping point in the State, having cleared near forty thousand bags of cotton the past season. The border counties, down the Alabama line, change from the prairie, and partake more of the character of the Chickasaw Cession. It is a beautiful and healthy range of counties, finely watered, and, for several years, fast increasing in population and growing in wealth. Cotton grows well, and the lighter grains abundantly, which is wagoned to Gainsville, or some shipping point in Alabama, on the Tombigbee river, and thence to Mobile.

A large district of the State is known as East Mississippi, which really includes the South East, and part of the Southern portion. Though one of the oldest, it is one of the most thinly settled portions of the State. The people of East Mississippi boast, and with reason, of their good health, pure bracing air, and delightful water. The character of the land is mixed—some poor and some very rich—broken hills and fertile valleys. Cotton is produced, though to no great extent; corn and small grain abundantly; sometimes rice in small quantities. Fruits are plenty. This region is somewhat famous for cattle, in which a chief part of the possessions of many of its citizens consists; hence has often been applied to them the familiar soubriquet of the "cow counties." The country is indeed highly *pastoral* and possesses many of its pleasant characteristics; without the soil or the market for the sole cultivation of the heavier Southern staples, it rejoices in other advantages, contributing perhaps more nearly to the general happiness of its people. Scattered thick here and there, are to be found lands of the most fertile and generous cast; and there cannot be met with a more independent or hospitable community than among the East Mississippians. Among their fertile valleys, and on their green hills, is to be found "many a cozy nook and dingle, bushy dell and bousky bourne fram side to side," where are to be seen the bright eye and rosy cheek of health, and to be felt the warm heart and generous hand of a frank and manly people.

A small portion of their trading is done at Jackson, the *present* terminus of the Vicksburg railroad; a small portion down Pearl river to New Orleans, and the greater part to the city of Mobile.

The portion of the State bordering on the sea shore, with its bathing, fish, oysters, and pleasant summer retreats, is well known to the dust-covered denizens of New Orleans. It is becoming a place of resort, as well for own people as for the citizens, and bids fair soon to rival the famed gatherings of Newport and Cape May. Back from the sea coast is generally a sandy, broken tract, covered by quantities of fine pine. The turpentine business is already attracting attention; application has already been made by individuals to the General Government for grants of public lands there situated, in order to test the business and thereby enhance the value of the residue. A large factory has been opened, and others are preparing for the business. The position and material favor such a trade, and in a few years it will no boubt become heavy and profitable, and furnish a fine investment for capital.

The south-west and country above it, though the oldest, is the portion of Mississippi least known to the writer. The soil is rich, and the population numerous, wealthy and highly distinguished for intelligence. The course of trade of a portion is through Bayou Sara, on the West Feliciana railroad, and the whole to New Orleans, through some point on the Mississippi river. Among others may be mentioned the ancient and time-honored city of Natchez.

I will now direct your attention to the only remaining section of Mississippi which I can notice. Commencing some fifty miles below the mouth of the Yazoo River, inclining to the interior for about one hundred miles in a line gently circling northward, up through the center, then diverging to the northwest to a point below Memphis, including the counties of Desoto and Panola, is to be found as noble a sweep of country as any in the world. It is washed by the Mississippi from Memphis to Vickburg, and is intersected by the Yazoo, its head waters and tributaries, throughout its greatest extent. The facilities for market are unequaled. The Yazoo river, running, as we have said, through nearly its whole extent, is an excellent stream, affording steam navigation sometimes as high as the southwest corner of Marshall county. The soil is of the most productive character, being, as it is called, *swamp land.* It possesses all the strength of the prairie lands, without their sticky, adhesive and corrosive nature. This region of our State has come into cultivation at a comparatively recent period; it having been, heretofore, considered damp and unhealthy. This impression is fast losing ground, and the cotton planters, deserting the rolling uplands, are fast pouring in upon the "swamp." Indeed the impression of the sickness of the South, generally, has been rapidly losing ground for some years back; and that blessing is now sought with as much confidence on the "swamp lands" of the Yazoo and the Mississippi, as among the hills and plains of Carolina and Virginia. Population of the very finest character is being attracted hither; and, in a few years, it must be the wealthiest and most flourishing part of Mississippi. When other portions of the State shall, in the lapse of time, become worn out and exhausted (as they will, unless our mode of cultivation is greatly improved), it will be the storehouse, the granary, the Egypt of the surrounding country. One drawback on these lands, however, is their liability to overflow from freshets in the Mississippi river. This danger is diminishing every year, and as population increases, levees, good and substantial, will be built. An effort was made at the last session of the Legislature, to pass a Levee Bill, which failed, but which will be renewed with better success at the next session. Some years ago Congress donated to the State of Mississippi 500,000 acres of land, to be applied to purposes of Internal Improvement. Most of these lands are located within the district we are speaking of. Under an act of the Legislature they were advertised to be sold on the 1st of January last, by the Secretary of State, and Planter's Bank bonds and coupons to be received in payment therefor. There is a considerable quantity of Government land here also vacant, and selling for the minimum price. Very heavy tracts of land are here also held by speculators, whose necessities and our tax laws are forcing to sell. The natural advantages of these lands are appreciating them in value every year, and the present is probably the most advantageous period to purchase which will ever occur again. I may also mention that there are considerable quantities of these lands, owned by old Commission Houses, and foreign Banks, and no doubt could be purchased of them low.

The section last spoken of embraces the counties of Yazoo, Sunflower, Washington, Bolivar, Coahomo, Tunica, Tallahatchie, and a portion of De Soto, Panola, Yallobusha, Carroll and Holmes, and is generally known as the Region of the "River counties."

Mississippi can as yet boast of but few works of Internal Improvement. There has, however, for a few years past, sprung up a strong disposition to carry out something of the sort. The idea of connecting Memphis by a railroad, running through North Mississippi, with the Alabama, Georgia and Carolina road, has been broached and advocated through your Journal. The plan is feasible, and is, every day, engaging the attention of men who will accomplish their undertaking.

For several years we have had a Railroad from Vicksburg to Jackson. This road has long been graded twelve miles east of Jackson to Brandon; by an act of the last Legislature, our two per cent. fund, donated to us by Congress for such purposes, was appropriated to extending and completing this line to Alabama. Commissioners were appointed for the purpose, who are now actively engaged in so doing. The Road will soon be completed to Brandon, and if a small amount of foreign capital can be attracted to it, it will be completed, so as to connect with the Atlantic at Charleston. The recent addition of Northern Mexico to our Union, the immense mineral wealth, and the convenience of its ports and harbors, toward the rich trade and commerce of the Orient, render the question of a land connection between the Californias and the Atlantic a matter of pressing and glorious interest. It is, however, too important a theme to be discussed here. At an early day, if agreeable to you, I will take up the subject, and from an examination of a mass of papers heretofore before the United States Senate, lay before your readers a sketch of the different projects connected with the above.

There is one cause which at present I will mention as operating against the resources and population of Mississippi: is the heavy amount of Government lands remaining unsold within her borders. By the Report of the Commissioners of the General Land Office, they amounted, on the 30th June, 1845, to 10,409,034 acres. Of these, there had been in market *five* years, 1,018,114 acres; *ten* years, 451,390 acres; *fifteen* years, 2,974,097; *twenty* years, 934,131; *twenty five* years, 894,424; *thirty* years, 2,924,172; and *over thirty* years, 1,222,706. These lands are all held at a minimum of $1.25 per acre, at which price they can never be sold, and will remain a heavy incubus upon our prosperity. The subject calls loudly for the action of Congress, and was ably urged upon it by General Shields in the Report above named. Under the graduation system, of about 4,344,725 acres in nine years, was sold 3,469,320.92 acres, and the balance is, and will be soon disposed of. Every consideration demands strict legislation, economy, comity to the States in whose borders these lands lie, and justice to the mighty wave of the frontier population, sweeping onward to the base of the Rocky Mountains and the shores of the Pacific, and extending the laws and institutions of our country across the continent. The removal of all difficulties in the way of the occupancy of our public lands, has always been a favorite idea with me, and, in connection with it, I cannot here help alluding to a public man, whose official career is now nearly run—one whose untiring industry and unvarying accuracy, have made him famous, whilst his far reaching sagacity and comprehensive ability have shed a mighty flood of light upon all the financial and industrial interests of his country. I allude to Robert I. Walker, of Mississippi, and I cannot better conclude this subject, than by quoting his own language in reference to it. "Reduce," says he, "the price which the laborer must pay for the public domain; bring thus the means of purchase within his power; confine the sales to settlers and cultivators, in limited quantities; preserve thus hundreds of millions of acres for ages to come, as homes for the poor and oppressed; reduce the taxes by reducing the tariff, and bring down the prices which the poor are thus compelled to pay for the comforts and necessaries of life—and more will be done for the benefit of American labor, than if millions were added to the profits of manufacturing capital."

There is much else which I could well allude to in connection with my State, but I am warned to conclude. I can only say, that, to my view, no State has fairer and brighter prospects before her in the future, if prudence shall rule the action of her people, and wisdom guide their counsels and conduct.

ART. III.—COMMUNICATION BETWEEN NEW YORK AND NEW ORLEANS,

PROPOSED NEW ROUTE FOR A DIRECT COMMUNICATION BETWEEN NEW YORK AND NEW ORLEANS, ACROSS THE PENINSULA OF FLORIDA.

Since the reception of the following paper, we have had an oportunity of conversing with senator Yulee, of Florida, who is an enthusiastic advocate of the measure it proposes, and who has taken an opportunity of bringing it before Congress. Mr. Yulee states, that considerable interest has been manifested by northern capitalists in the undertaking, and that some early steps with regard to surveys, &c., will be made. Certainly, nothing can be more important than the proposed connection, and nothing can be more immediately practicable, if taken spiritedly in hand. The idea of bringing New Orleans and New York, these great emporiums, by a safe and pleasant medium of travel, within *four days* distance of each other, is worthy of the progressive spirit of the age, and is but another indication of the high destinies of our country. We shall be obliged to Mr. Fairbank, or senator Yulee, for further and more full particulars, and shall be happy to afford the review as a medium of their discussion.—ED.

SINCE the acquisition of Louisiana, and the immense and increasing commerce which has its center of operations at New Orleans, a speedy and direct communication between New York, the great northern emporium of commercial interest, and New Orleans that of the south and south-west, has engrossed much of public attention, and has been constantly a matter of absorbing interest.

The first and most natural channel of communication, was by means of ship packets between the two places; and, for freight, this has continued the sole means of transportation. Until within a few years this was the ordinary, and still continues to be the usual, route of passage. The distance by sea is estimated at about 2,500 miles, or nearly as far as to Europe; and the length of passage from fifteen to thirty days.

By means of the steamboats ascending the Mississippi and Ohio Rivers, a new channel of communication was opened inland by steamboats, as far as Pittsburgh, and connected with Baltimore, within a few years past, by the Baltimore and Ohio rail road. This route, following the circuitous meandering of the Mississippi and Ohio Rivers, and ascending against their strong currents, although perhaps performed with greater comfort, is but little less in point of time than that by the packet ships.

The most direct route has always been through Alabama, Georgia, South Carolina, North Carolina, Virginia, and other States on the line of travel. Performed by stages, this was an exceedingly tedious, difficult, and expensive route, and was only used by those to whom time was an object. The gradual opening of railroads through these States has increased the comfort and dispatch of this route. It is now so connected, that but about one hundred miles of the journey are made by stages, and the remainder is traversed by steamboats and railroads. The most disagreeable feature of this route, at present, is the outside steamboat connection between Charleston, S. C., and Wilmington, about one hundred and fifty miles, in steamboats of very ordinary size and construction; the shallowness of the water upon the bar at Cape Fear rendering the employment of larger steamers impracticable. Another disagreeable feature is the rare connection of the different roads, and consequent transfer of passengers and luggage at the different terminii, with day and night traveling in the cars, and but little opportunity for rest. The time within which the connection is made through to New York, is eight days; which may be abridged, perhaps to seven, when the one hundred miles of stageing is connected by railroad.

Within the past season, by the opening of the Illinois Canal, a new route has been thrown open by way of the great lakes, by which nearly the whole distance is performed by water, with an increase of distance, but an addition of comfort; this route being some three or four thousand miles, but not more expensive than the others.

The impulse given to commerce, by the introduction of ocean steamers, although soon realized in this country, has not been acted upon until within the last three years; our dock yards have teemed with the rapid construction of ocean steamers. This mode of communication is evidently superior to any other yet made use of. Combining the greatest safety with the greatest possible speed, and under the influence of American enterprise, the steamship is becoming the striking feature of the present century; and with these upon the ocean, and the electric telegraph upon land, we are compressing the globe, by the rapid transmission of intelligence, into a thousandth part of its former compass.

An attempt was made, as early as 1820, to run a steamship from New York to New Orleans. A vessel, built by Messrs. Henry Eckford and David Dunham, of New York, named the Robert Fulton, made several trips; but it was found that her engines were not sufficiently powerful, and it was abandoned. Since that time, we are not aware of any thing worthy of the name of a steamship line, until within the past year. Messrs. Newton, Howard & Co., built the Crescent City, which proved, on her trial trip, that she was probably the fleetest steamship afloat, and that the distance between New York and New Orleans could be run in less than seven days, and in advance of the mail. The steamship Falcon has also been placed on the line, and others are being built. This is a new era in the communication with New Orleans, and its success has awakened new attention to the subject. The rapidity of the passages of the Crescent City is still a matter of surprise and gratulation. But since the successful issue of this route, the question has arisen, can the route be further shortened, and accomplished in less time?

It is well known that the project of a ship canal, to cut off the long and dangerous circumnavigation of the peninsula of Florida, has been talked of ever since the acquisition of Florida. Within a few years, several railroad routes have been suggested, terminating on different points and water-courses; and in the year 1845, a survey was made across the peninsula, from the St. Johns river to the Gulf, by Capt. Blake, of the United States Topographical Engineers, under the authority of government.

As these ocean steamers are enabled, even with the circumnavigation of the peninsula of Florida, which requires a circuit of nearly one thousand miles, to compete successfully with the mail line by railroad and steamboats, upon the most direct land route, it is self-evident, that if the distance to be traversed by them could be lessened, their length of passage would be shortened by that amount. A canal, or railroad, across the northern part of the Florida peninsula, would seem to afford the only prospect of thus shortening the distance. A canal is, for many reasons, impracticable; or, at all events, in comparison with a rail road, does not offer advantages commensurate with the increased expense. A railroad, then, which should enable these steamers to connect at each end, and avoid the circumnavigation of the reef, is the desideratum. The first question to be solved is, can harbors be found at the terminii on the Gulf and Atlantic, having sufficient depth of water to admit steamers of that class? The next point is, the length and feasibility of construction, considered in reference to the distance saved. With these data we can form a correct conclusion in reference to the practical importance and bearing of any such proposed route.

We will proceed to discuss the topographical view of the matter. By a look at the map of the United States, it will be seen, that, commencing from a point due east from New Orleans, the peninsula and its reefs extend southerly about four hundred miles, the circuit of which is, of course, out of the direct line northerly, occasioning a loss of nearly one thousand miles. Upon the Atlantic side, in about latitude 31°, and a little north of the latitude of New Orleans, is found the harbor of St. Marys, ninety miles south of Savannah, having a depth of thirteen feet on the bar at its lowest tides, and some twenty-three at high tides. This is better than Charleston, and equal or superior to Savannah, and is amply fit to admit ocean steamers. On the opposite side, upon the Gulf, in a south-easterly direction, is found the harbor of Cedar Keys, where, it is believed, sufficient depth of water exists for a similar purpose. The distance from St. Mary's harbor, on the Atlantic, to Cedar Keys, on the Gulf, is about one hundred and forty-five miles; and the distance of Cedar Keys from New Orleans, about three hundred and seventy-five miles; while the distance of St. Marys from New York is not over eight hundred miles; thus giving a route, if practicable, of only thirteen hundred miles from New York to New Orleans, and much less by some hundreds of miles, than any practicable traveling land route.

The next consideration is, the feasibility of such a route and the cost of its construction. Upon this point it is only necessary to say that the larger portion of the route has been surveyed by the late Lieut. Blake, of the Topographical Engineers, and ascertained by him to be of easy and exceedingly cheap construction, as the route traverses principally an open pine country, very level, and intersected with no considerable water courses, and with abundance of timber along the line, suitable for its construction. The whole route, with all its appendages, ready for operation, it is believed, would not cost over two millions, if laid with a heavy T rail.

We will next examine the probable time within which the distance between New York and New Orleans could be traversed by such a route. The distance from New York, by sea, to St. Marys, by the usual route for vessels, is about seven hundred and fifty miles; St. Marys being but about ninety miles from Savannah. The Cherokee has, with ease, made her voyage to Savannah in sixty hours, and could readily make the voyage to St. Marys in sixty-five hours. By the rail road route proposed from St. Marys, on the Atlantic, across Florida to Cedar Keys, on the Gulf, a distance of one hundred and forty-five miles, five hours would place the traveler on the Gulf, and the three hundred and seventy-five miles to New Orleans could be run in thirty-five hours; thus giving one hundred and five hours, or about four days, as the running time from New York to New Orleans, and, including all detentions, in less than five days, even at the present rates of speed, which are constantly being increased; a shortness of passage, rendering all competition, by any other route, entirely out of the question. When taken in connection with the advantage of having only two transfers of baggage, and the superior comfort, convenience, and safety of traveling by sea steamers, would ensure for such a route, when established, nearly all the travel from New Orleans and the Gulf ports, North, Texas, Mexico, &c.

Would not such a road receive from the Gulf a large amount of freight for transfer to the Atlantic. The time and risk saved, the interest on capital, the accuracy with which commercial transactions could be carried on, would all be reasons pointing to such a probability. The numerous small vessels engaged in freighting cotton from St. Marks, Apalachicola, and Mobile, to New York, could be dispensed with, and the cotton carried by steamers to the Gulf terminus of the road, and thence transferred to St. Marys and shipped direct to Europe—that harbor being capable of receiving the largest class of merchant vessels. The local business of Florida would form no inconsiderable item of the business of such a road.

This subject is worthy of the attentive consideration of all who are interested in the prosperity and commerce of the southern States, promising, as it does, to bring New York and New Orleans within an easy four days' journey of each other, and almost following up the telegraph in rapidity. It has already attracted the attention of some of the leading commercial minds of the North, and efforts are being now made to carry this project into successful execution.

ART. IV.—COTTON,

AND THE ONLY PRACTICAL METHODS PRESENTED TO ITS PRODUCERS OF ADVANCING AND CONTROLLING ITS PRICE.

THAT this country does now, and probably for ever will, possess the monopoly of raw cotton, is assumed. Great Britain has in vain endeavored to become independent of us, and has made fruitless experiments after experiments to encourage the growth of this staple in every part of her empire most favorable to its cultivation; the field of experiment has been unlimited, and the means used have been fully adequate to the object in view.

As long as children come into the world naked, so long is the cotton fabric likely to be of more extensive use than any other covering; until the iron hands of machinery are palsied, so long will civilized man put down all competition of bark, grass, furs, and even of wool, with his cotton garments.

Have we clothed all the shivering people of the north? Have we covered the nakedness of all who dwell within the tropics? By no means: a small proportion of mankind have just begun to rely on us, and the residue of our race have markets for us yet to be opened.

We alone, then, have a great staple, which may be made of universal use, and to the consumption of which no limit can be fixed.

But how shall we enlarge its consumption, and how regulate its value? *To do this effectually we must control its fabrication as well as its production.*

So long as we rely on cotton spinners and weavers, who are starving this year, fighting next year, and in all years are trodden to the earth by the tax gatherer and police officer, it is very clear that we cannot effect the end in view. Neither shall we be more successful while we waste our substance and exhaust our energies in and about the costly machinery of exchange.

To undersell the *tapa* of the Pacific, and the fabrics made of grass and the fibres of the cocoanut and agave, we must sell cheap. The rich will buy the lawns at any price, but the masses require cheap sheetings. How shall the cost of these be lessened? What says the cotton planter? Is he willing to grow the material at rates cheaper than now? The starving operative of Europe declares that he can barely live on what he now receives as wages; the Manchester, Glasgow, and Lille mill owners, show a balance sheet indicative of a most unprofitable business; the sailor refuses to work at lower rates, and the shipyards of the country are now comparatively silent, because capital invested in ships does not pay.

Turn the glass whichsoever way he will around the present horizon, the cotton planter sees over-production and the fall in value of his staple. Even if he grows less cotton and more food and hemp, the food and hemp growers of Kentucky, Missouri, and Tennesee, deprived of a market for their staples, will send their slaves to compete with his in the cotton fields of the South. He has but one mode of relief. *His staple must be fabricated nearer home.* The profits of making the cloth must not be absorbed in the support of kings, queens, bishops, field-marshals, the paupers, soldiers and sailors, the mistresses of nobles, and the pensioners of the state in Europe. And how shall these expensive instruments be discarded? Perhaps the salvation of England depends on the present state of things. *The cheaper she can buy the raw cotton, the higher taxes she can impose on her people who work it up.* Her policy is always the same. The power of her government and of her monster bank has ever been, is now, and for ever will be, exerted to their utmost limit, that her imported raw materials shall be laid in at the cheapest, and that her manufactured commodities shall be sold at the highest rates.

Can the cotton planters, scattered over nine large states, ever expect to fix a uniform and satisfactory price on their staple by individual association. The history of individual combinations, formed to effect pecuniary interests, shows clearly the futility of any such movement.

There are but two methods now presented to the cotton planter for achieving his independence, and securing reasonable profits on his capital and a fair remuneration for his labor. Both are equally certain. The one would effect the result almost immediately, and the other in time. The one by legislation, and the other by the force of circumstances.

At the formation of our constitution, the South insisted on a positive prohibition of export duties. It was then evident that she was to be chiefly dependent on agricultural products, and she wisely provided that these products should be burthened with no domestic shackles, but be left free to seek the best markets of the world. But *then* the supply of these products was far less than the demand; *then* the South had no knowledge of her capacity to fabricate her own products; *then* she did not expect the settlement and cultivation of the country west of her for centuries; *then* human labor did the work now performed by iron machinery; and *then* we did not, as now, control the whole cotton district of North America.

But circumstances have changed; we do now over produce, we can now manufacture. We are, in respect to industrial pursuits, situated as older countries have been, and we need not be ashamed to examine the lessons of national policy taught in foreign schools.

The general policy, the common usages of civilized nations, are generally based on the principles of equity and common sense. Now, if there is one principle that more than another has been acted on by every government, civilized and uncivilized, it has been that of making every possible profit out of any and every material and commodity over which it possessed the control.

Holland monopolized spices—Spain, quicksilver—France, silk fabrics; England put a prohibitive export duty on raw wool for a long series of years, and she even interdicted, under the most severe penal enactments, the exportation of mind until it had expended all its profitable results at home. For years the English inventor of labor-saving machinery was under a closer surveillance of the police than the felon; he could not leave home, nor could he send abroad the slightest description of his improvements.

But the instances of this policy are so numerous and well known, that it is needless labor to cite more of them. The policy remains the same in this as in preceding centuries, and is strictly followed by every country except our own. Our cotton planters could afford to be liberal, while their profits were ample, and until they had the means of realizing the profits of the mill, as well as those of the field.

The first method then proposed for consideration, is the calling for such an amendment of the constitution as will authorize the imposition of export duties, and, when this is obtained, the imposition of such an export duty on raw cotton as will ensure the fabrication of all *coarse* cotton goods at home; laces are for the rich, and, as they are more the product of human hands than of machinery, their material will bear almost any duty.

If the cotton planter asks for such a change, and such a law, both can be obtained The food and hemp growers of the West, and the manufacturers and carriers of the East, would interpose no difficulties, but, on the contrary, aid the movement, when they understood its object.

Can any one doubt the result? Let the year 1865 be fixed as the period when the law advocated should take effect; will any one deny that, within the period named, cotton mills would start up, as if by magic, all over the country, and sufficient for the working up of the entire cotton crop, whatever its increase may be? Our own surplus labor would direct its attention to this employment and to its auxiliary branches of industry. The English, French, Belgium, Swiss, Prussian and Saxon cotton mills, would be gradually closed, and their spinners and weavers, by hundreds of thousands, would bring their tools of trade where they would be of use. Capital would follow this labor; we should have a home market for whatever is produced by our fertile soil, and the rich ores that now lie undisturbed beneath that soil; money would accumulate, because we should have ceased to send it abroad in large quantities for the necessaries of life. Our exports of cotton fabrics would be exchanged with China for tea, with Brazil for coffee, with Southern Asia and the Islands of the Indian Ocean for spices, with the West Indies for inter-tropical fruits, with Chili, Peru, Mexico and California for the precious metals. Our land would appreciate, our labor would be better paid, and our capital would yield larger returns up to the point at which the supply of the cotton fabric—the product of the combined surplus labor of the country—would reach the demand.

The South has but to will this thing and it is done. The result *can* be accomplished by ourselves in half the time named. The machine shops already in operation in the country, have the capacity of duplicating our own cotton machinery in five years; we now have the best teachers and in abundance, and we have spare labor enough for twice the number of mills required for our purpose.

But, although I believe the constitution and laws will eventually be so modified and framed, as to protect our home industry from the legislation and preponderating capital of foreign nations, I do not look for such a change of opinion among southern men as would result in affording us immediate relief by law.

I present, therefore, the other method, and append to it such statistics and calculations as may best commend it to the attention of the cotton planters, who are now investing their surplus capital in lands and negroes to make more cotton and a superabundance of that which is now superabundant.

Let the cotton planter look into the *modus operandi* of manufacturing cotton. An examination of the subject will show him, that less labor, capital, and care, is required in the fabrication than in the production of his staple; and that one bale of cloth will bring him more money, or more exchangeable commodities than five bales of his material. Let him employ the cheap and inexhaustible power and ores of the West; let him use cheap labor and skill at home, and invite both from abroad; let him encourage the building of ships out of our cheap timber, with fastenings of our tenacious iron, with rigging from our cheap hemp—to be provisioned with our cheap food, and to carry our own fabrics of cotton to the most remote consumers; let the cotton planter of the South, and the food and hemp producer of the West, unite in developing all the home resources that will tend to cheapen the production, the fabrication, and the transportation of the materials which should naturally be combined at home.

That the cotton planter may see the relative cost of producing and manufacturing the cotton, I give the following estimates. Of the fairness of the first, the planter is fully competent to decide. Of the correctness of the last, I have to say that it shows *actual results*. The mill, from whose books the items were taken, is of modern construction and has been running twelve months. Its operatives are chiefly new to the business, and its position is remote from machine shops, founderies, and other auxiliaries, and it is seventy miles by railroad from the city where its material is purchased and its goods are sold.

The cloth is the finished product of the labor and capital of the planter, the carrier, and the manufacturer and their respective adjuncts.

For convenience I take a mill of 10,000 spindles, making No. 14 sheetings, averaging $2\frac{30}{100}$ yards to the lb. The cloth sells in the markets of the central West at 7½ cents per yard. I allow 6 cents per lb. for the cotton, good middling, and midling fair, which is higher than its present value.

The mill will employ 275 operatives, chiefly girls, and produce per annum 4,500,000 yards, at 7½ cents		$337,500
Cost of cotton 1,800,000 lbs. at 6 cents	$108,000	
50,000 bushels of coal, at 3 cents	1,500	
Carding (less waste) 1,650,000 lbs. at 0.804 cents per lb.	13,266	
Spinning, " " " at 0.893 cents	14,734	
Dressing including starch at 0.564 cents	9,306	
Weaving including all expenses at 1.612 cents	26,598	
Repairs, including machinists, or wear and tear at 0.788 cents	17,002	
General expenses, including all officers, insurance, transportation, taxes, &c., at 1.251 cents	20,642	211,048
		$126,452
We may now deduct further expenses attending the operations of the mill owned by distant stockholders, and managed by paid agents.		
Say salary of Treasurer	500	
Say 5 per cent. on sales, and guarantee	16,875	
Salary of local manager	3,000	20,375
Net profits,		$106,077

The cost of mill	$25,000		
The cost of manager's house	3,000		
The cost of tenements for 275 operatives	20,000		
The cost of warehouse and store	2,000		
The cost of 10,000 spindles and machinery complete	160,000		
Working capital for over 4 months stock,	40,000		
Capital invested,	$250,000	yields	$106,077

COST OF PRODUCING 1,800,000 lbs. OF COTTON.

The fixed capital is the land, improvements and negroes. Sixty working hands are as many as can be profitably managed by an overseer. There will require 900 acres of good land. Let us take a model plantation on the Mississippi river, between latitudes 32° and 34°.

600 acres of land in cotton, at $32 per acre	$19,200
150 acres of land in corn, at $32 per acre	4,800
150 acres of land in pasture and wood, at $12 per acre	1,800
60 working hands averaging $650 each	39,000
Cost of gin, mill, dwelling and cabins	5,000
Cost of mules, oxen, carts and tools	4,000
Fixed capital in the model plantation	$73,800

Annual cost of operation—	
Overseer	$600
Clothing $15 per hand	900
Deficiency of meat, sugar, coffee, &c.	650
Medicine and attendance	200
	$2,350

The accretion of slaves is about balanced by deterioration of stock and improvements, abrasion of the river and renewal of levees.

There is an average loss on bagging and rope. $20 per acre will be regarded as a low cost of clearing land, and $12 per acre for wild land is below its present rate.

The average produce per hand is not over 7½ bales of 400 lbs. each.

Then the model plantation will yield per annum 180,000 lbs. of cotton, and ten plantations will be required to supply the mill with 1,800,000 lbs.

The aggregate of slaves to produce the cotton is	600
The amount of fixed capital is	$738,000
The aggregate cost of operating the plantation is	23,500

SUMMARY.

The gross product of the joint operations per annum is			$337,500
Of this the fixed capital of the planter receives		$108,000	
Less cost of operating	$23,500		
Less carriage $1 per bale	4,500		
		28,000	
Or $738,000 yields		$80,000	
The fixed capital of the manufacturer receives		$337,500	
Less cost of materials and of operating or $211,048 plus 20.375.		231,423	
Or $250,000 yields		$106,077	

The capital of the planter is nearly three times that of the manufacturer, and yet he receives the least portion of the profits. The 600 laborers get less than the 275. The planter has to look after ten overseers, on whom there can be but few checks. The manufacturer has but five overseers and these are checks on each other. The manufacturer is charged with the cost of a treasurer, who gives bonds for the faithful disbursements of the money he receives and of a manager whose high salary ensures the exertion of all his energies. They who are responsible to the planter may assign floods, winds, the worm, sickness of the hands, &c., as the reason of short crops; they who are accountable to the manufacturer can find few excuses.

Your readers will bear in mind that these estimates of the results of manufacturing cotton, are based on the supposition that the mill is located at a coal field on the northern bank of the lower Ohio, where power, food, and lands are cheap; where the climate will allow full work, to which eastern and foreign skilled labor can be attracted, and where a large part of the expenses of transportation can be saved.*

ART. V.—THE MISSISSIPPI SWAMP.

"VARIETY is the spice of life." I do not mean to insinuate that my piece will receive the merit of a spicy composition; I only wish to suggest to those of your readers, who dwell on the *hills* and contemplate with pleasure the beautiful scenery which nature has spread out before them, in the romantic eminences, gurgling streams, beautiful waterfalls, highly cultivated farms, and populous neighborhoods, with the stirring industry and active enterprise which characterizes them, to transfer their contemplations to the "vale beneath," and become interested by the contrast, if not from the intrinsic worth, of the region of country which flourishes under the above cognomen. It is not supposed that a name, in this instance, is indicative of the real nature of the thing. The term *swamp*, as understood from Webster, has a different meaning from the popular designation of the term, which custom here has sanctioned, and habit allows. To those who desire information of its character and location, a short description may not be out of place.

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* We give the views of our correspondent in regard to *export* duties upon cotton, without any comment now. We have, however, no prejudices against such duties which do not equally apply to those upon the *imports* of the country for which its exports are exchanged.

First, permit me to correct a very erroneous impression and very prevalent, in respect to the low lands bordering the Mississippi river, which will introduce us to the gist of this subject. The arable lands, or those suitable for cultivation, and for the purposes of organized society, are not confined, as many suppose when descending or ascending the river, to the lands immediately skirting the banks. The forests on both sides, in the rear of the plantations, would seem to indicate this. Like parallel lines they run up and down, and appear to the beholder to divide the tillable land from the morass, leaving him to infer that all beyond, where the trees are covered with moss, is not relieved by a single feature to extricate it from associations the most gloomy and unpleasant.

But enter just beyond this perspective, and there are flourishing plantations. You may continue your route for fifteen or twenty miles and the same interesting spectacle is afforded. The activity and industry of southern plantations is as much exemplified to this distance from the Father of Waters, as on its banks.

A stranger just entering the *swamp*, as it is termed, or the "back lands," is surprised with its beauty, its evenness, the winding roads leading by plantations of fine location, and in a high state of cultivation. Perhaps it may be spring, when all the land is robed in loveliness; or in the glowing summer, when the bright tints of richest coloring gladden in the sunshine; or in the golden autumn, when every hue is brightened and forest and field are ripe for the garnering: the lovely scenery which meets his eye, the luxuriant soil, and rich beauties, impress the mind so favorably, that he is filled with delight.

The road in its winding way leads along the bayous—one running into another, of sufficient width and depth to be used as canals, which traverse the country in every direction—then along the banks of some magnificent lake, which spreads out for miles, affording an enchanting view of the verdant fields and tall, black forests. You then reach a river of fine proportions, bold current and high banks, but of tortuous course, offering excellent advantages—carrying the rich products to the mart, and giving the privileges of the bold Mississippi in miniature. Then is seen the indications of a fine estate; its neat dwelling house, and neat flower garden in the front, with the rose of varied hue and odor, and violet and jasmin; the grapes, &c.; the walks arranged with tasteful grace, with bower and alcove manifesting the taste of the projector and proprietor. There is the gin house and mill, and the large pastures where the horses and cattle and sheep promiscuously feed, the "quarter," and maybe the "chapel," and other of the arrangements of a large planting interest.

Scattered here and there are numerous mounds of various height and width; objects of great curiosity—the cemetery of the savages who once lived and roamed as lords of the land.

Nothing can attest so fully the energetic character of our race, as the improvements and cultivation which are seen everywhere in the lowlands bordering the Mississippi river, or in the *swamp*. By the wholesome influence of municipal law, this whole country is bordered by levees, which to a great extent protects it from inundation. Very little of the land but what is secured, and the inhabitants live as peaceful, and nearly as free from care, as it respects an overflow, as if they were living on some eminence.

What has time and industry effected? A few years since, it was considered quite an adventure to remove, and an exhibition of great heroism to reside here. Now many families have made it their permanent residence; many who were to the *manor* born, as well as in the more humble walks of life; and they have beautified the wilderness, and caused refinement and elegance to spring up, while religion and literature have not been neglected.

The health of the lowlands has been impeached. Many who are pleased with its rich soil and bountiful products, are fearful of its healthiness. Its level character, its bayous and lakes, have excited their imagination, and the miasma which is supposed to arise from them, to infect the air and produce disease. This consideration first prevented emigration, even when the barriers on the Mississippi were sufficient to prevent overflow, and even now how many suppose that it is

> "A land of carcasses and graves—
> One dreary waste of chains and slaves."

But if experience can attest to the truth of this matter, surely we say that the health of this country compares favorably with that on the hills; and indeed, it is considered by many superior. *Unprejudiced* persons who have resided on both have declared this. But, we may with reason conclude that, as the country advances in age and prosperity, and comforts more generally abound (the products of prosperity), we may anticipate a greater freedom from disease, and to rival *then* our neighbors of the hilly country.

Society is conducted on the same principles here as in the older settlements of the country: respect for the laws of the land, respect for religion, an increasing interest in the establishment of schools and other appliances to develop the talent of our citizens, and render them applicable to the various pursuits of refined life. We cannot, of course, boast the advantages of our neighbors who are situated in regions where learning and religion and refinement has existed from time immemorial, and who reside on the high dry land where there are no obstacles, such as bayous or lakes or rivers, to prevent interchange of civilities, or learning from each other "manners as they rise." Possessing now a population of industrious and enterprising citizens, endowed with the principles of genuine hospitality, of sweet and facinating frankness, and who by that free heartedness, and proud thought, and just appreciation of the blessings surrounding them, prove themselves worthy their heritage, we may look forward to the future in hope that, in every respect, improvement shall mark our progress, that we may enjoy all the ameliorations which religion and literature produce, and all the comforts and advantages which follow a dense society and a diligent attention to that important branch of agriculture, so actively pursued in the sunny south.

Hopewell, Tensas Parish, La.

ART. VI.—SUGAR.

MINT OF THE UNITED STATES,
Philadelphia, Feb. 5th, '49.

To PROF. J. D. B. DE BOW:

Dear Sir—Herewith, I send you for publication in your Review, a copy of a letter, dated 1st August, 1848, addressed to me by N. Rillieux, esq., of your city, together with a translation of a pamphlet by Mr. Degrand of Paris, published in 1845.

I also inclose the successive articles of a newspaper controversy, extracted from the New Orleans Picayune, and handed to me by Mr. Rillieux; leaving it, however, entirely to your own judgment and pleasure, whether or not they should be reprinted.

The circular to which Mr. R. refers, and which gave rise to said controversy, is contained in your Review for March, 1848.

It was, I believe, the wish of Mr. Rillieux, that I should embody the papers accompanying his letter in a second edition of my reports, now in press; but they have appeared to me too controversial to justify their insertion, or more than a reference to them, in a document printed by order of the United States Senate. I have, therefore, concluded to send them to your Journal; in which they may find an appropriate place, as well as any criticisms they may call forth.

Of Mr. Degrand's pamphlet, I have elsewhere, though less explicitly, given my opinion, that it is the production, rather of an interested inventor, than of an impartial and scientific engineer. It will, however, be interesting to many of your readers; some one of whom may find time to point out the errors it contains. For my own part, I must forbear to pay attention to the sugar industry, that I may prosecute investigations more purely scientific with undivided and constant devotion.

Very respectfully,
your obd't serv't,
RICH'D S. M'CULLOH.

Philadelphia, August 1st., 1848.

R. S. M'CULLOH, ESQ.

DEAR SIR—I have learned that another edition of your report upon Cane Sugar is to be published, under your direction, by order of Congress. There are some inaccuracies in that report to which I beg leave to call your attention, so that they may, if you see fit, be corrected in the forthcoming reprint. A brief history of the progress of boiling sugar by vacuo in France, may serve to point out some of the errors referred to in their proper order.

In 1821, or '2, the first vacuum pan was set up in France. It was heated by the direct application of fire, and the vacuum was maintained by an air pump worked by horse power. It was a complete failure.

In 1831, Roth introduced his first vacuum pan with large condenser. After some years it was found necessary to apply thereto an air pump worked by a small steam engine. Finally, Roth's large condenser was dispensed with, and his apparatus became a common Howard pan, using high pressure steam. Since that time, all the vacuum pans in France have been heated by steam of high pressure, instead of low steam as used in England. Until recently, the French pans were of small size, making frequent small strikes at intervals of twenty or thirty minutes. In 1844, they began to use pans of larger size, and suitable for graining the sugar in the pan, but they still adhere to the injurious practice of using high steam.

I come now to my apparatus for making sugar, the invention of which I am prepared to trace back to January or February, 1832, by the testimony of gentlemen of the highest standing in Louisiana. In 1834, a part of my invention was described to Derosne and other persons in France; and subsequently, my idea of boiling one vacuum pan by the vapor from another, was conveyed to him by persons who can be traced. [See Note.] In 1843, Derosne made a trial of the last idea in such a defective manner as to show plainly that he did not comprehend it. Mr. Dumas, in the sixth volume of his Chemistry, gives a drawing of that apparatus tried by Derosne, which you have copied in your report and stated to be the same you saw in operation in Cuba, on the estate of Don Villa Urutia, and on the Amistad estate near Guines, owned by the widow Ayesterau and her sons. I have recently seen all the apparatus set up by Derosne in the island of Cuba, except that of Don Contero; and none of them use the steam of one pan to boil another. I afterward saw Don Contero. in Havana, and he informed me it was not so used in his apparatus. Don Ayesterau told me that, when you visited their plantation, he had only *one* vacuum pan with a Degrand condenser. The next year, he bought a second pan, a plain Howard pan, using a pumping engine and injection. On that estate, they now have one vacuum pan with Degrand condenser and pumping engine, to boil to syrup of 28°, and one plain Howard pan and pumping engine to make the strike; both pans being supplied with high pressure steam direct from the boilers.*

Don Ayesterau told me he wished to use tigers, but that he could not granulate in his pan, and must, therefore, procure either a large English pan or one of mine. At Don Villa Urutia's, they have two Degrand pans; one for syrup, and one for the strike. At Don Diego's, two open steam pans for syrup, and one Degrand pan for the strike. At Don Arieta's, two open steam pans and one Degrand pan, to make the syrup, and one Degrand pan for the strike. The whole of these pans are heated by high pressure steam direct from the boiler. At Don Soulieta's, the last and largest, and the most improved apparatus set up by Derosne in Cuba, there are two open steam pans and two Degrand pans, to make the syrup, and one Degrand pan for the strike, a pumping engine of the size formerly made by Derosne for each of the two first pans, and one of larger size with condenser and injection for the strike pan. There is also a Degrand condenser, for condensing the steam of the two grinding engines. The whole five pans are supplied with high pressure steam direct from the boilers.

The quality of the syrup made on all these estates by the Degrand apparatus (as made by Derosne), is precisely the same as that made by the open steam pans. The great defects of this system (as made by Derosne) are the use of high pressure steam and of vacuum pans of too small size.

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* As the only notice of that apparatus is the one in Dumas's Chemistry, and as Derosne has never applied the same idea to any of the apparatus made by him since, it is certain that he did not succeed at all. N. R.

I hand you, herewith, a publication by Degrand, in which he asserts and proves that Derosne, so far from improving the apparatus invented by him, has actually injured it by his modifications.

Derosne also attempted to deprive Degrand of the credit of his invention, but the Royal Court of Paris recognized his rights, declared him to be the only and true inventor, and ordered Derosne, under a heavy penalty, to take off his own name as inventor from all the apparatus he had made and substitute "Degrand inventor," in large letters. In justice to the inventor, I suggest that you record this fact in your report.

I also hand you, herewith, a statement in tabular form, showing the comparative results of different methods of making sugar in Louisiana. It is difficult to get precise data, because the planters are averse to making their operations known. I was, therefore, in some cases, compelled to get my information from persons employed on the plantations. The general correctness of the statements may be inferred from the fact, that only two of the planters have made any objection thereto. One, Mr. Valcour Aime, and his engineer, objected to the statements in the report, and I refer you to a newspaper correspondence from which you may judge of the merits of the case. The other, Mr. Osgood, briefly denies in general terms the correctness of the statement respecting his crop. He was requested to give the data to enable me to correct the table, and refused to do so. I have, therefore, taken some pains to inform myself about the matter. I have obtained from persons on his plantation the following statement of his crop:

Sugar made - - - - - - - -	650,000 lbs.
Fuel consumed:	
" wood - - - - - - - -	1,300 cords.
" begassa, from year before, equivalent to -	550 "
" coal, 2,000 barrels, " " -	400 "
	2,250 "

I could not ascertain whether the quantity of sugar given was the total product of first and second sugar, or first sugar only. I believe it was the whole crop; in which case there would be about 470,000 lbs, of first sugar and 180,000 lbs. of second sugar; which gives a consumption of 4.78 cords of wood per hogshead of first sugar, instead of 4½ cords, as given in the circular.

If the weight of first sugar was 650,000 lbs., then the consumption of fuel was 3.46 cords of wood per hogshead of 1,000 lbs. As to the price of his sugar, I stated that his molasses sugar sold for 3½ cents; this was a mistake; it was the molasses sugar of his neighbor, Mr. Johnson (sold by same merchant), which sold for that price. He succeeded in selling about one-half of his crop in New Orleans, at 6¢; but to keep it at that price, he was compelled to send the balance to Mobile, where it was sold at the same rate; thus netting Mr. Osgood, at New Orleans, about 5¢—say an average price of 5½¢ for the whole crop as given in the circular.

N. Rillieux.

Note.—In December, 1831, or January, 1832, I visited the estate of T. A. Morgan, Esq., in Louisiana, and proposed to build one of my apparatus for that gentleman. He had made up his mind to have a common vacuum pan for his next crop, and declined my offer.

In January, same year, I was in treaty with Mr. W. Freret for the same purpose, and with the same result. Finding that the planters were not yet prepared to adopt such an improved apparatus, I set up at my own expense, in November, 1832, on the plantation of Mr. Cucullu, some open steam pans, to show to the planters that steam could be used for evaporating cane juice. I was compelled to take it down before trial, because it happened to be in the way—and it was deemed absurd to believe that the cane juice of Louisiana could be boiled by steam.

In the beginning of 1834, I was in treaty with another planter of Louisiana, who brought his overseer to my office to see the sketch of my apparatus, since patented. This overseer soon after went to France, and there saw Mr. Cail (afterward of the firm Derosne & Cail), to whom he explained what he could recollect of the apparatus I had shown him. He did not believe it to be my invention, and supposed that it was from Paris, and that Cail knew all about it, being engaged in making sugar machinery. Cail told him it was new, an excellent idea, and that he had a vacuum pan already made to which he would apply it, and desired him to call in six weeks and he should see it carried out. The pan, with the improvements, was sent to the National Fair of Paris, in the beginning of July, where it was seen by Degrand, who had invented and patented the same thing in 1833. He entered suit against Derosne for infringement of patent, but the matter was settled by compromise, in which it was agreed that Derosne should be the assignee and only builder of the patent apparatus for the north of France and the colonies, with the condition that he should pay to Degrand a fixed sum as patent charge for every apparatus he made.

In 1835, I set up one of my complete apparatus at the expense of myself and others concerned with me, on Z. Ranson's estate, Parish St. Charles, La., which was taken down without trial and before completion, because of the death of one of the persons associated with me in the experiment. The sugar maker engaged to operate with this apparatus, described to Derosne and his other friends, in France, my idea of boiling one pan by another; and in 1843, Derosne made a trial of that idea in such a way as to give positive proof that he did not understand it.[*]

N. R.

ART. VII.—TRUE SECRET OF AMERICAN WINE MAKING.

Having formerly, at some length, treated, in your valued periodical, on vine culture, I offer you now a few remarks on the true secret of successful wine making in our country, and especially in *southern* vineyards. And, in so doing, I shall have reference to certain remarks of Mr. N. Longworth, of Cincinnati, Ohio, in a letter of his, in Burke's Patent Office Report of 1847. Mr. L. combats the opinion of the American Institute, that the grape is a certain crop, and that the Scuppernong is a superior grape for either the table or wine. He further remarks, that Mr. Adlum, and others, put too much sugar in wine made with the addition of that ingredient only. That I have not misrepresented Mr. L.'s position any one may satisfy himself, I think, by reading his letter. That Mr. Longworth deserves great credit for his enterprising spirit, in turning some of the banks of the Ohio river, like those of the Rhine and other European rivers, into vineyards, and for making more wine, annually, than any vintner in our Union (three hundred barrels in one year; my product, as next highest, being about fifty barrels, only), would appear from his letter, and from others in the Patent Office Report of 1845. But so much the more dangerous any erroneous opinions of his, tending to discourage the vineyard enterprise, coming from so high an authority. For, if true that the grape is an uncertain crop (in our southern country, particularly), and successful *one* year in *four*, only, and that the Scuppernong, the greatest of grapes for yield, and reputed excellency every way, is inferior for fruit and wine, and that Mr. Guignard's pound of sugar per gallon is too much, notwithstanding he lost the greater part of his wine by turning sour, then, I say, who, in the South in particular, would undertake the vineyard business?

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[*] The remaining papers, referred to by Professor M'Culloh, will appear in the next number of the Review.—Ed.

But suppose a full crop of grapes, every year, is expected, or two thousand gallons per acre, as the Scuppernong is capable of yielding, and, through an uncertain process of making, most of the wine is spoiled, as was Mr. Guignard's, through, I venture to say, his *too small* quantity of sugar—who would think it desirable to make a large crop of grapes? And whatever may be said of making a very small quantity of wine, *dry* or *wet*, by shriveled or half dried grapes, as I have done, I am bold to assert that the position, that an American vineyard can ever be made profitable, without any safe-keeping, enriching ingredient whatever, added to the grape juice, is *altogether chimerical*, or *Utopian*. Efforts to make good wines as a crop, in the teeth of European and other experience of ages, will issue in *utter failure*. Suppose, for a moment, that European vintners of Port, Madeira, and Malmsey wines, should cease now from what they have been doing for ages, viz., adding one-third spirits to their wine, how long would their wine reputation and business last? How soon would the highly reputed medicinal, and other superior qualities of these wines, cease to draw annual millions from our country.

Mr. Longworth himself advises southern vintners to add one-third brandy, or spirits, to their vine juice, if designing a brandied wine. But how much sugar, I emphatically ask, is equivalent thereto, if a sugared, or sweet wine is designed? I say, from chemical knowledge and experience, *three pounds* per gallon, *at least*. Where, then, is the consistency of saying, that Mr. Adlum and others put too much sugar in their wines? And no mean judges of foreign, as well as American wines, in our State capital, Raleigh, consider my Scuppernong Hock—made with three pounds of doubly refined sugar, as the only enriching, safe-keeping ingredient—the best wine anywhere found in market. It commands four dollars per gallon, readily. My Scuppernong Champaign, made with a fourth spirits, and a pound of sugar per gallon, sells at two dollars. Common brandied Scuppernong brings one dollar per gallon, or that made with about one-third spirits, only, as Mr. L. recommends. So that the Scuppernong grape is capable of making wines of all grades of excellence.

And that it is the very best of grapes would appear from this, if no other circumstance, that of the many guests visiting my establishment, paying entrance fee, and buying grapes to carry away, the Scuppernong is preferred to all others by ninety-nine out of a hundred; though I have about two hundred varieties of grapes, and among these the most approved by Mr. L. himself; as the Catawba, Herbemonts, Madeira, &c., &c. Indeed, Mr. L. reasons as erroneously in identifying the Scuppernong with the Muscadine, as if one should deny the famed excellence of a certain peach, because of its being of the same species as another tree of inferior fruit. And so certain is the grape crop here, that I have not known any failure, save one, for about twenty years, and that was last year, a very partial one of the Scuppernong. Some years since there was an almost universal failure of fruit in the United States, through late spring frosts, but there were abundance of grapes notwithstanding. About two years before, having sent Scuppernong vines to Mr. Noyes of or near Natchez, Miss., I learned from him that his Scuppernong vines bore finely that year, and was almost the only fruit in his region, and that they were esteemed most excellent. And further, that the bottles of Scuppernong Champaign I had inclosed in the box of vines were pronounced first-rate, by the best judges at Natchez and in the vicinity.

But to return from these digressive remarks connected with the main subject, I repeat the position, that the grand secret of making American wines, never to disappoint the vintner in his hopes of success therein, is to put in *plenty* of safe-keeping, enriching ingredients, of a pure healthful nature, as sugar and spirits, or both. Spirits add their own bulk to the volume of wine, and sugar adds half its bulk; so that two pounds or a quart of sugar, adds to the quantity of wine one pint; and that pint sold at one dollar per gallon, pays well for the sugar. Doubly refined sugar, at twelve and a half cents per pound, doubly pays for itself in wine, when the latter sells for four dollars per gallon. True, alcohol is the purest preservative substance in nature, and, through a kind Providence, pervades (as distillation shows) all the vegetable creation for the good of man.

Mr. Longworth repeats an adage that, "a *poor man* cannot make good wine;" yet his letter states that he, the *rich man*, put some *poor* German emigrants in the way of making *good* wine and a profitable business of it, on the banks of the Ohio, near Cincinnati. How long this will continue the case with his Catawba, so prone to rot, and the older the vines the worse, and with his Eutopean recommendation to make dry wines with no safe-keeping or enriching ingredients, to suit the artificial foreign formed tastes of eastern connoisseurs, I cannot divine. But it seems he begins to *complain* of *uncertain* crops. This as it may be; my object is to set forth an American system of vinyard business, that may eventually and measurably at least, meet the wants or calls of American citizens for good and unequivocally healthful, unadulterated American wines, so that we shall not always be dependant upon foreigners for annual millions worth of an article that we are capacitated by climate, soil, and in all respects, to make ourselves. My vineyards are now becoming profitable, and as an item of their profit, I state that I made the present vintage about fifty barrels of wine, none of which I expect to lose by spoiling, and which I calculate to sell at a good price, as I have preceding crops. I have sent my wines to various sections of our Union, in bottles or in casks, and the concurrent testimony in their favor is, that they are preferred to the *foreign*. One advantage of my system of wine making, and not a small one, to the *poor man* at least, is, that the wine is fit for use and market directly; and, connected with that circumstance, is another—that the wine, with plenty of pure, safe-keeping ingredients, not only is not apt to spoil, but keeps improving with age, by having the stamina or *capital* to improve on.

One mode for a vintner to keep improving annually in his art of making wine, I will name ere I close this communication. This mode I have practiced with happy effect for a few years, viz.—to put down in a record book, all essential or important particulars respecting the making of any one cask of wine, as when and of what made, quantity, and kind of enriching and safe-keeping ingredients, &c., &c. And to that cask attach a label with the number of the cask thereon. This label transferred to another cask, into which the wine is racked, designates the wine. By turning to his book the vintner is never at a loss to learn, from the *past*, wisdom for the *future*. For instance, in my own experience this year, my casks run up to number fifty-six, containing various quantities, from say fifteen to seventy gallons each. And No. 1, in my book, reads like this:

"No. 1.—Made July 10th, of *green* grapes, plucked from ends of branches, cut off from Catawba, Isabella, and other kinds prone to rot, to prevent those grapes left from rotting. These green grapes were mashed in my machine, and spirits put into the mashed ingredients, to the amount of at least a fourth per gallon. The whole was left to ferment from Saturday night till Monday morning, when it was pressed off; strained, while running from the press, through folds of woolen blanket; then two pounds of common sugar were added—two pounds besides spirits, for more ingredients are necessary for green grapes—and then turned into a cask. Quantity, thirty-three gallons; color, faint red; racked July 18; August 5th, fined it with six whites of eggs; result, a good sweet wine. Sold the barrel for $33, at Louisburg, N. C., August 7."

I select another sample from my records of 1847, viz:

"No. 13.—Made October 1st, of white Scuppernong grapes, except one and a half bushels of black Scuppernong grapes, to give a color by fermenting. Grapes mashed by the machine, and mashed ingredients left to ferment forty-eight hours; weather cool. Pressed and strained, and to the twenty gallons of purified juice added sixty weight of doubly refined, pulverized sugar. Racked the wine several times, and a beautiful and first rate bright red wine the result, called Scuppernong Hock, which was sold at Raleigh for $4 per gallon."

My Scuppernong Madeira is made pretty much in the same way, except it is not fermented till after it is turned into the cask and sugared, It is colorless, or of all white Scuppernong, and brings me three dollars in the market. The Scuppernong Champaign brings two dollars, and is made with a fourth pure spirits and one pound of sugar per gallon.

In haste, yours,
SIDNEY WELLER.

Brinkleyville, Halifax Co., North Carolina.

ART. VIII.—SLAVERY IN THE NEW TERRITORIES.

The following paper was prepared by an able southern jurist, who declines for the present, that his name should be made public. We commend the argument to the whole South.—ED.

THE advocates of the Wilmot Proviso belong to several classes of the people, distinguished from each other by very different characteristics. Many come from among the waiters on popularity, who believe there is sufficient strength in the question to obtain for them offices and the spoils of victory, to which their statesmanship gives them no claim.

Some are driven, by the fear of its power, into the service of the fanaticism which raised, the exciting question; and others are restrained, by their apprehension of the phrenetic influence, from making open opposition to the Proviso, and direct their efforts solely to the object of avoiding a decision of the question. Persons of the last mentioned description equally dread to incur the final condemnation of their own consciences or the displeasure of the disturbers of the country's peace. They are in effect the supporters of the Proviso. The advocates of it are encouraged to hope for the aid of the undecided and wavering at some future time, and consequently to persevere in their efforts to keep up and increase the excitement, which threatens, unless it be speedily checked, to pervade the whole Union.

The feeling and ignorance from which the question arose—the influence and motives by which the supporters of the proviso have been enlisted—and the number of them may be increased, and by which, also, the opposition of the intelligent and patriotic in many quarters has been silenced or paralized—are all unfavorable to a correct interpretation of the constitution, and a just judgment of reason upon the angry controvery.

While the Provisoists profess to believe that Congress has constitutional power to prohibit slavery in any territory of the United States, they admit the exercise of it in California and New Mexico would be unnecessary, because they affirm slavery had been previously abolished in these territories, and was prohibited by the laws of the government, which, they say, existed in them both, at the date of the cession to the United States; and that the prohibition must continue in force till it shall be annulled by competent authority. If there be such a prohibition, the effect of it should be determined by the constitution, the treaty, and the law of nations. If by the authority of these the prohibition is in force, a judgment of the highest tribunal of competent jurisdiction in favor of the obligation of the prohibition would settle the question. A judgment on either side, would be considered, by the slave-holding States, as decisive and final. These States deny that Congress has power either to authorize or prohibit slavery in a territory. If the power belonged to Congress, it might be exercised as a State may exercise it, either to prohibit or authorize the relation of master and slave. If slavery be not now authorized in California and New Mexico, these States admit there is no power to establish slavery there. The power to do so, will come into existence hereafter, and belong to the State or States which may be founded in these territories in future, and admitted into the Union. Till States may be established there, the exemption of the territories, if it exist now, from the institution of slavery must continue.

If the Provisoists have faith in their published political creed upon the subject, that there is a legal prohibition in full force in these territories, which must continue to be a law until it may be repealed by competent authority, there ought to be no such controversy as the existing one between them and the inhabitants of the slave-holding States. After the facts shall have been ascertained, the only questions will be of a legal constitutional character; and the authority to decide them does not belong to Congress, but is vested, by the constitution, in the judicial department of the government of the United States. If the question were, as to the effect of a supposed Mexican law, of either territory, which could operate only on individuals, would any representative of a State in the Senate, or of the people in the House, incur the forfeiture of his reputation for a proper sense of impartiality and justice, by making an attempt to induce Congress to express an opinion favorable to either side? *All* could and would see, that the controversy involved a legal question, which ought to be decided, unless it should be abandoned by the parties, by the exercise of judicial authority. If the alleged prohibition exist, the actual question is, can it operate in the territories consistently with the constitution of the United States? If it cannot, it was annulled by the cession, because the prohibition was repugnant to the constitution. This question relates not only to the conflicting interests of persons, but to the relative political power, also, of the slave and non-slave-holding states. But, although it may affect the relative power and supposed adverse interests of different sections of the Union, yet as it is a constitutional, and therefore a legal question, it is as exclusively within the jurisdiction of the Courts, as if individual parties only were interested in it.

The rights and interests of the citizens and other inhabitants of the States, included in the different sections of the Union, are involved in this controversy. If it should be determined that the alleged prohibition does exist, and has the authority of law, the claim of slave-holders to employ their slaves in the territories, where many of them believe they could increase the comforts of their bondmen, and derive greater profits from their labor, would be destroyed. The effect of such a decision would be to deprive many masters of their right to migrate and establish themselves in the territories, as their attachment to their slaves would prevent them from residing where they were prohibited from settling any member of their families.

The capacity to distinguish between right and wrong, which would penetrate without difficulty any disguise intended to conceal the odiousness of an attempt to induce Congress to express the opinion of that body upon a legal question involving only the rights of individuals, ought to perceive the gross impropriety there would be in the expression, by Congress, of an opinion upon a question of the same character, raised in a case of the greatest importance, and involving not only the conflicting interests or claims of citizens of different States, but of different sections of the Union—each composed of many States.

If the Provisoists assert the existence of the prohibition contrary to their belief of what is true, and the obligation of it in opposition to their judgmant, they act unworthily, and for the purpose of misrepresenting the conduct of slave-holders, who are thus made to appear to claim the right to settle slaves in territories, the laws of which, as the Provisoists affirm, prohibit the institution of slavery. The advocates of this opinion betray their own want of confidence in it, by their repeated and clamorous efforts to induce Congress to enact a law to prohibit what they assert the existing laws of the territories forbid now and have long prohibited.

In some brief remarks, which Mr. Berrien made in the Senate of the United States, on the third of March last, he correctly stated, that, according to the law of nations, the laws affecting the relation of individuals in a ceded country, continue in force after the cession; but those which affect the relation of the people to the sovereign, cease with his dominion who transfers the country to another sovereign.

As slaves are made by the constitution of the United States a part of the basis of taxation and of the representation of the people in the House of Representatives, he took the position, that a Mexican law which prohibited slavery in the territories before the treaty, was political in its character and ceased to operate there immediately the cession was made, because the relation of the inhabitants to the Mexican sovereignty was terminated by the transfer of the territories to the United States.

As the people are our only sovereigns, the inhabitants of the territories, at the time of the cession, were placed by that act in their present relation to the American sovereigns, and the constitutional law of this new relation, authorizes the inhabitants of the ceded country to own and hold slaves there, because the constitution recognizes the right of the citizens of any state, if a majority of them should determine, to allow it to have property in slaves and to hold them. The citizens who may found in future any state in the territories, will have the election to abandon, or to exercise, the right of owning and making slaves a part of the basis of the taxation to which their state may be liable, and of her representation in Congress. Every territory has the constitutional right to receive within its limits and protect all persons who may lawfully constitute a part of the basis of the representation of a state, and property of every kind which the constitution allows to be included in the basis of taxation. Congress cannot foresee that the inhabitants of any territory, when they may act as citizens of the United States in establishing a state, will not prefer to make slaves a part of her basis of representation and a source of her wealth, which may be charged with direct taxes for the use of the General Government. The will of the people in relation to the matter, cannot be controlled, when, as citizens, they may found a state on the territory they inhabit; and every person, or subject of property, they might prefer to retain in their state, if they had been previously in the territory, they are constitutionally entitled to receive and hold in the territory, that they may exercise, at the proper time, their election—to which they have a clear and perfect right, either to keep and preserve within, or exclude from, the limits of their state, any persons or property they constitutionally may. Congress has no power to legislate for the purpose of controlling this election—none to prohibit slavery in a territory—as the probable effect of such a prohibition would be, to induce the inhabitants, when they founded a state, to continue the prohibition; and none to authorize slavery—the existence of which would tend to procure the establishment of the institution by state authority.

The opinion seems to us to be absurd, that Congress has power to close, in a territory, any source of wealth or of political power—as the inhabitants, when they take rank as the citizens of a state, may think such source would be, and which the same territory, when organized as a state, would have the unquestionable right to open. Congress has no power, with the view of procuring the establishment of the institution of slavery, by the authority of some state which may arise hereafter in the territories, to require by law, that of the immigrants, who may annually establish themselves there, one-third, or any other proportion of them, shall be slaves. The want of power is equally clear to prevent, by an act of Congress, the settlement in the territories of slaves, and of families consisting of free white persons and of slaves. The effect of the Wilmot Proviso would be to prevent the establishment in the territories, of many families, some members of which are the owners of slaves.

The constitution of the United States requires, "that representatives and direct taxes shall be apportioned among the several states, *which may be included within this Union*, according to their respective numbers; which shall be determined by adding to the whole number of free persons, including those bound to service for a term of years, and excluding Indians not taxed, three-fifths of all other persons." The fact is indisputable, that the persons, for the representation of three-fifths of whom the constitution provides, were slaves. Slaves were held in every state of the Union when the constitution was adopted. The constitution contains not only a recognition of slavery in every state, which was then in existence, but a prospective recognition of it in every state which might be formed and admitted into the Union in future. The constitution gives no authority to Congress to interfere with any state—or any people, when they may be engaged in founding a state—in the selection of the persons the citizens of the state may prefer for the basis of her representation and taxation; but the constitution does require all the persons mentioned in it, to be enumerated in every state where they may be found, and according to the directions in the constitution for the purpose of ascertaining and fixing the number of representatives to which each may be entitled at every apportionment. The rule for the apportionment of representatives and direct taxes, is applied by the constitution which established it to all the States of the Union, regardless of the time of the admission of any. It governs the first apportionment to a state as well as every subsequent one; and *the first apportionment*, therefore, of every new state.

The constitutional right of a new state to have slaves as well as free persons enumerated according to the constitution, at the first apportionment made for her, involves the right also, in the inhabitants of a territory on which the new state may be founded, to hold slaves—because the right of the same persons as citizens of the state could not be exercised at the first apportionment, unless this right had been previously enjoyed by them while they were the inhabitants of the territory. The effect therefore of a denial of the right of the people of a territory to hold slaves, is a denial of the right of the same people, when they may establish a state, to have slaves enumerated according to the constitution at the first apportionment of her representatives. To prohibit slavery in a territory before the inhabitants have the power of the citizens of a state to exercise their own will, and decide for or against the institution, would be to render that will, if it should be expressed at the proper time in favor of slavery, ineffectual at the first apportionment for their state—because the prohibition by Congress would prevent the existence in the territory at that time of the persons whom the new state might prefer for a part of the basis of her representation and taxation.

There is an obligation on the United States, the effect of which is to entitle the territories to be admitted as a state into the Union, whenever the inhabitants may give proof of their capacity for self-government, and the number of them shall be as large as that of the residents of the territories heretofore received as states into the Union; or the number may be sufficient to bear the burdens and perform the duties of a state. The obligation created on the United States, by the 9th article of the treaty, in favor of the Mexican inhabitants who may elect to become citizens of the United States, could not be discharged without the acknowledgment of the right of the inhabitants of the territories to establish a state, at the proper time, to be determined in view of the considerations which have been mentioned. The obligation to admit the territories, is as perfect as one would be to receive as a state a territory with one hundred thousand inhabitants, including persons of every description, upon the ground that a compact between the Union and such territory bound the former to admit the latter as a state whenever her population amounted to this number. Congress would have no authority, if it should change its opinion as to the policy which dictated the compact, to limit the annual number of settlers in the territory, or make a requisition of those allowed to establish themselves there from particular descriptions of persons. The effect of any such act of Congress would be to retard the increase of population, and postpone to a more distant period, in violation of the compact, the right of the inhabitants to establish a state, and have it admitted into the Union. If the act made the right of any persons to settle there to depend upon their civil and political condition, the act would affect the right of the inhabitants, when they might found a state to elect whether slavery should be authorized or prohibited.

The sovereign power of each state belongs to the citizens of the state. A portion of this power they have granted by the constitution of the United States to the General Government: the remainder of it was retained by the citizens of each state. The sovereign power, in every state, to establish or prohibit, continue or abolish, the institution of slavery, belongs to the citizens of the state. This power, the citizens of a state may exercise in a convention, in which they adopt or alter their constitution, or in the legislature of the state, if they be authorized by their constitution to exercise such power in the legislative department of the state government.

Of the states admitted into the Union since its formation, some have established and others rejected, the institution. Some of the old thirteen have abolished the relation of master and slave, and nearly an equal number of them has preserved and yet maintains it.

The citizens of the several states who may migrate and establish themselves in the territories, and the Mexican inhabitants who may become citizens of the United States, according to the treaty, together with such other citizens as were there at the conquest and cession, and who yet remain, will be the first citizens of any state that may be founded there in future. Citizens of slave-holding states may settle themselves there who are opposed to slavery, and intend to employ, at the proper time, their portion of the sovereign power, which will be exercised to establish a state in the territories, to prohibit the relation of master and slave. From non-slave-holding states citizens may go there with the intention of using their share of power to authorize slavery, that had been excluded by the will of the majority from the states they may leave. The will of all and of each of these descriptions of persons had been rendered ineffectual, by the adverse will of the majority of the citizens of the states from which such immigrants may go. But these, and all other citizens of the several states, who may settle in these territories, will carry with them equal and inherent shares of sovereign power, to be exercised whenever a state may be formed for the territory in which they may establish themselves. Whether the result of the exercise of this power at that time, will be the establishment or prohibition of slavery, no one can foresee. The result will depend on the will of the majority of the persons who shall have the right of citizenship in the new state when it may be founded. As the territories were acquired by the united power and resources of all the states, the citizens and other inhabitants of each state, have an equal right to seek homes there, and a new theater for the exercise of the sovereign power of these citizens, in the establishment of new states to be admitted into the Union, for the increase, we hope, of its prosperity, power and glory.

As the sovereign power belongs to the citizens of each state, it is divided into so many shares, and will so shortly be divided into many more, that the possessors of the numerous portions of it do not attract the attention which an absolute monarch does, and they themselves do not realize the possession of such power and habitually think and reason in relation to it as single sovereigns do. In this want of attention to the character of the citizens of the United States as sovereigns, is the source of all the difficulties which are encountered in the examination of the question we are considering.

If each of the states of the Union were an elective, but an absolute monarchy, with all the sovereign power of every state exercised by her monarch, and acknowledged by his subjects to belong to him; if the relation of master and slave were established by law, and slaves were numerous in some of the states and from the others excluded and the relation forbidden; if a union of the monarchies existed, and their foreign affairs were conducted and controlled by a council appointed by the authority of each; if this agency or government, in the exercise of power derived from the joint grant of all the sovereigns, should acquire by treaty any territory—what would be a just and lawful disposition of it? The agency or government of the league could not make it a state. A state, when founded on the territory, must be an elective monarchy, like the other states; as we suppose a guarantee on the part of the league that each state admitted into it shall be of this form and character. The citizens of these states who might settle in the territory, together with the old inhabitants, entitled under the treaty to the right, would become the citizens of the new state, when one might be established in the territory, and the monarch who might be elected by a majority of them, would have the exclusive right to determine whether the institution of slavery should be authorized or prohibited, continued or abolished. The government would hold the country, while it continued to be a territory of the league, in trust, to encourage the settlement of it by the subjects of all the sovereigns of the league, and to protect the persons and property of all the immigrants. How long would the league endure, if, in the council which governed it, the influence of the slave-holding monarchies was the greatest, and prohibited the employment, in the territory, of labor and capital, in the establishment and working of manufactories, as an inducement to slave-holders to settle there, that they might elect a monarch who would establish slavery, and thus increase the power in the league of the slave-holding monarchies?

The general government of the United States acquired and holds these territories in trust for the sovereign citizens of the several states. The object of the Wilmot Provisoists is to induce Congress, the trustee, to prohibit the transfer of property in slaves, and the removal of their persons to the territories—to forbid the employment there of most of the moveable property of slave-holders; while the right of the inhabitants of the non-slave-holding states is treated as unquestionable to remove to, and use in, the territories all of their own moveable property.

The consequences of the accomplishment of this object would be the exclusion from the territories of most of the persons who are slave-holders and would otherwise establish themselves there, and the settlement of nearly the whole country by immigrants from the non-slave-holding states. The combined operation of these causes would secure the conversion of the territories into non-slave-holding states, and the soil and most of all the advantages of the new acquisitions, mainly for the inhabitants of the existing states of this description. What would be thought, by all the disinterested and impartial of our race, of an individual trustee of a large real estate, abounding in rich gold "washings," who, years before the time when it would be his duty, in the execution of the trust to divide and sell the estate in many different parcels, permitted some of the beneficiaries to work the gold "washings" with all the means and laborers they could transfer and employ in them, and thus increase their ability to purchase and monopolize the estate at the sale to be made by the trustee, while he prohibited the others from using more than half their wealth in the employment of labor in the same kind of work?

If the treaty had provided that the former Mexican laws should continue in force, it would require the exercise of the proper legislative power to terminate the authority of all, except such as are political, by repealing them. But an express agreement in the treaty, for the continuance of the obligation of the political laws of Mexico in the territories, would be void, as the treaty-making power is incompetent to give authority to laws which would be inconsistent with the constitution. If a Mexican law prohibited slavery in the territories while they belonged to Mexico, a stipulation in the treaty for its continuance, could not preserve its authority in the ceded country after it became a territory of the United States. The effect of the cession would be to annul the law, upon the ground of its repugnance to the constitution of the United States. But the acquisition of these territories, does not present the case of a country conquered and relinquished, or ceded, to the United States, with laws the obligation of which the treaty secured.

The feeble Mexican government, which existed once over a small part of the territories, had been subverted, and, upon its ruins, a military government established, by the authority of the President of the United States, in his character of Commander-in-chief of the American army, before the treaty was made. The military government existed at the time of the ratification of the treaty, by the governments of the United States and Mexico. The legal effect of the cession, was to terminate the military government, and the conquered and ceded territories were left without a government or civil laws. If there were a government *de facto* in the territories, it would derive its authority from the implied assent of the inhabitants to the power it exercised, and a majority of them consists now of American citizens. Some of these were there at the conquest, and at the date of the cession, and the others have migrated there since. The Mexican government and laws had been overthrown, before nine-tenths of them established themselves in the country; and they have done no act since, from which their assent can be implied to the re-establishment of any of the laws of the old local, civil government. There is, indeed, no lawful civil authority in the territories, and there can be none, till after the establishment, by the inhabitants of the ceded country, or by Congress, of a government, or the establishment of a state in the territories and the admission of it into the Union. The condition of things which exists there, is the same that it would be if the territories had been without Mexican inhabitants and occupied solely by savages, not subject to Mexican laws, but having a right to occupy the soil, while the fee in it, and the dominion over the country, belonged to the Republic of Mexico, and the United States had taken forcible possession of the territories first, and obtained a cession of them afterward. In the case we have supposed, there would be no Mexican laws in force, in the territories, at the date of the cession, as the jurisdiction of the Mexican Republic had not been extended and established over the waste territories. There is no difference between the principle that would apply to a case in which a Mexican government and laws had not existed before the cession, and the case that has occurred, in which all these had been subverted before the treaty was made that contains no provision for the re-establishment of any of them. Mexican grants of wild lands, would entitle the grantees, in either case, to the estates conveyed, which the United States would be bound, by the treaty, and the laws of nations, to recognize and protect.

Any inhabitant of the territories, whether an American or Mexican, who was there when the treaty was made, or has gone and established himself there since, occupies a territory of the United States, but over which no civil government or civil laws exist. A Mexican inhabitant, who owned property there before the cession, has a good title to it still, unless it has been impaired, or transferred, by some act of his own. Any American, or other person, who is there with a right to property, which was property in the state of the Union from which he migrated, is entitled to hold and enjoy it as property, in the territories. As there was no law of the territories which prohibited the removal of his property of any kind, and none of the United States, he had as clear a right to take and use it, as he had to go himself and reside in the territories.

Every owner of property is entitled to an equal measure of protection for it, from the military power of the United States, which may be employed there, and, if Congress should establish a territorial government, it would be the duty of the government to protect equally, with impartiality and fidelity, property of every kind within its territorial limits and belonging to the inhabitants of the country.

As the Mexican inhabitants were left, by the cession and conquest of foreigners, as will be shown hereafter, in territories without local laws, and many Americans resided there when these events occurred, some of whom held slaves, and other slaves have been moved there since, and are held in bondage, the masters can establish as perfect a right to the property they claim in their slaves, by producing and proving the existence of the laws of the state, in which they acquired the property, as any Mexican inhabitant can to the property he possesses, by tracing his title to the laws of Mexico as the source of it. No American resident has a right to require the claim to moveable property, of a Mexican inhabitant, to be decided according to the laws of the state on which the American relies to maintain his own title to personal property. The same principle rejects the pretension of Mexican inhabitants to have the question of the title to such property, set up by an American resident, determined according to the extinct laws of the subverted local government, or of the Republic of Mexico. If a territorial government should be established by the inhabitants, or by Congress, there is no power in either to authorize the government to make a distinction between property of different kinds, within the territorial limits of the government, and to afford protection to one kind and withhold it from another, or to prescribe any.

The eighth article of the treaty, by which the territories were ceded, secures the right to the Mexican inhabitants to continue their residence there, and allows them the alternative of retaining there their character and rights of Mexican citizens, or of becoming citizens of the United States, according to their election, to be made within a year from the exchange of the ratifications of the treaty. The effect of a failure on their part to make an actual election within the year to retain their character of foreigners and of Mexican citizens, and the continuance of their residence in the territories after the expiration of that period, the same article declares shall be a constructive election, the effect of which would make them at the end of the year citizens of the United States. It is not probable there have been many, if any, actual elections under the authority of the treaty, and there could be none by construction before the 30th of May, 1849, the end of one year after the exchange of the ratifications. Every Mexican inhabitant could, if he elected to do so, acquire the right, under the treaty, to remain during his life, in the territories, as a foreigner and a Mexican citizen. The territories were ceded to the United States, with no people, unconditionally, and, as the effect of the treaty alone, incorporated with the people of the United States. The savages, who occupied the territories, were their own rulers, and not subjects of Mexico, and neither party to the treaty intended they should ever become citizens of the United States. Territory, merely, was transferred, without any Mexican inhabitants made absolutely, by the treaty, a part of the people of the United States, and, therefore, entitled, after the cession, to the benefit of all the laws that were not political in their character, by which they had been governed in the territory before the treaty. No laws of a sovereign, who cedes territories, can be impressed upon territory alone and made inseparable from it. If a territory be transferred without people incorporated by the treaty with the people who receive the cession, the authority of the laws of the former sovereign, in the territories, ceases with his dominion.

The Mexican inhabitants have the right reserved to them by the treaty, which, for any thing we can foresee, they may exercise, to leave the territories, and reside in some part of the Republic of Mexico, or to continue their residence in California and New Mexico, as foreigners and Mexican citizens. Should they become citizens of the United States, it will be the effect of a process of naturalization, after a residence, from necessity, for some time in the territories, after they became territories of the United States. They were foreigners before the cession, and their right to remain in the territories as foreigners was recognized by the treaty, which prescribed a mode in which they might afterward be naturalized and become citizens of the United States, as acts of Congress do for the benefit of all other foreigners, who establish themselves in the United States and apply for the rights of citizenship. The Mexican inhabitants have the privilege, in common with all other foreigners, of seeking and obtaining naturalization; but neither they or any other foreigners have, or can acquire, the right to subject to the laws of the native country of any of them the citizens of the Union in states, or in any territory of the United States.

The eleventh article of the treaty contains a statement of a fact made, and therefore affirmed to be true, by the governments of the United States and of Mexico, that a great part of the territories that were ceded, was occupied by savage tribes of Indians. They were not subject to Mexico, or to any local authority established by that Republic. From other sources of information we have learned, that all but small parts, comparatively, of the territories were occupied exclusively by the tribes referred to in the treaty. They had preserved their independence. They had chiefs and councils and usages, or laws, of their own. They acknowledged no allegiance to Mexico, and rendered no obedience to her laws; but were almost constantly engaged in wars against her. The Mexican inhabitants were indebted, for their occupancy of the soil, in many of their settlements, to the sufferance of some of these tribes, which had the power to terminate the privilege whenever they chose—and they frequently extinguished it suddenly, and took compensation for the temporary possession of the soil, in the plunder of the property, and the massacre of the people.

These tribes had, by their power and cruelty, excited such terror in Mexico, that the United States were required, by that Republic, to create, by the treaty an obligation upon the General Government to prevent the tribes, forcibly, if necessary, from making any incursions into any territory, which continued, after the treaty, to be a part of Mexico, and to punish and exact satisfaction for them from the Indians, if they should elude the vigilance and power of the United States, and make any such incursions.

These Indians, in the undisturbed possession of nearly all the territories, held slaves, as the parties to the treaty admit, in the 11th article of it, and would sell and transfer them to others; and, according to one of the most recent authorities, Indian men and women are held in legal servitude by the Californians, who are the descendants of the Spanish conquerors, and form the best part of the whole population of California.

The usage, or law, of the Indians on the subject, which prevailed over nearly all the territories, authorized slavery. At the time, and before the local government of the territories was overthrown by the employment of the military power of the United States, this Indian usage, or law, as well as the authority in relation to property of the same kind under which the Californians acted, prevailed. Property in slaves, held by the Indian inhabitants of the territories, and, probably, by white persons and Mexicans residing among the tribes at the time of the cession, is recognized by the United States in the eleventh article of the treaty.

One object of the article was to prohibit, in future, any purchase, by any inhabitant of the United States, of any Mexican or foreigner residing in Mexico, who had been captured by Indians inhabiting the territory of either of the two republics. This prohibition relates to all the persons who had been previously captured, and, consequently, to the persons who had been captured before the session by the Indians of California and New Mexico. Another, and the next part of the same article, binds the United States to exercise the influence and power of the General Government, faithfully, to rescue and return to their country, or deliver them to the representatives of the Mexican Government, all persons captured within Mexican territory and carried into the territory of the United States after the cesssion, as we understand the meaning and effect of the treaty to be. No part of the treaty requires the government of the United States to extinguish the claim of the Indians to property in their captives, or to prevent them from selling their captives to any other person than an inhabitant of the United States. The prohibition in the treaty extends no further than to make it unlawful for any inhabitant of the United States to purchase or acquire any such captives. In the limitation of the prohibition is a recognition, by the governments of the two Republics, of the property of Indians, or of those who claimed, under them, in such captives, and of the right of those who were the owners at the time of the cession, to sell their slaves to any other person than an inhabitant of the United States.

ART. IX.—HOW SHALL COTTON MAINTAIN REMUNERATING PRICES?

Various propositions have been advanced in reply to the above query. Some have proposed a "Cotton Planter's Convention," to reduce the amount of production. Some have attacked the doctrine of *protective duties* as destructive to the planters, like Mr. McDuffie, in his "forty bale theory," and advocated "free trade," as the natural parent of "high prices." The truth is, the question is difficult of solution; and no wonder such various opinions are ventured, even among the most intelligent. We are willing to let the planters speak for themselves, and give publication, with pleasure, to the following communication from one of them. If the plan advocated be objectionable, or impracticable, it may suggest to some one a better one, and, at all events, it seems to us far less impracticable and objectionable, than the *Cotton Planters' Convention*, which takes for granted, that the supply of the staple is above the world's wants. The world has yet millions to be clothed, if we will but trade with them upon fair terms. Give us new markets, and extended commerce, and the demand for cotton will be equal to, if it does not exceed, the supply, which experience begins now to show is *limited*.—ED.

PANOLA COUNTY, *Mississippi*.

TO J. D. B. DE BOW, ESQ.—Seeing numerous calls made upon the cotton planter, by the Carolina and Georgia papers, to meet in *convention*, to take into consideration the adoption of some plan to protect ourselves from ruin, which must ensue, if no relief be found—for, really, our principal commodity (cotton) is not selling for enough to pay the current plantation expenses—I am induced to write to you, making some suggestions to said Convention, or to you, whom we look to as the great advocate of our rights. I have been a constant reader and admirer of your Review, which has given me an insight into the plan that I propose for the *protection* of cotton planters, which is this, that we (the cotton planters) call on our commission merchants to form a *Chamber of Commerce*, to be called "The Planters' Chamber of Commerce." There are, in New Orleans, Mobile, Augusta, Charleston, Savannah, &c., commission merchants, who can communicate by Telegraph, every hour, who shall be considered our representatives, elected by our patronage, as are our members of Congress, by our votes, and *they shall act in concert*, which the cotton planters can never do, from the fact, that we are too numerous, and scattered over too large an extent of territory, without the means of communicating with each other by Telegraph. It shall be the duty of this "Chamber" to say, that cotton shall not be sold for less than a stated price, and any merchant, departing from that law, would not again receive any patronage. Said Chamber might fix the price of cotton at Memphis, Natchez, and all other inland towns. The object would be, to make the commission merchant the true friend and representative of the planter, and, my word for it, no cotton planter will patronize any merchant who will not adhere strictly to laws enacted by such a Chamber. It might be urged, that the factor had accepted for the planter. To illustrate, grant that I draw a bill on my factor to the amount of my cotton—the bill is sent forward and my cotton is not sold—the bill goes to protest, in order to sustain its legal claim: are there not capitalists that would always be glad to take paper, based upon cotton, when it is known that the parcel is in hand? If not so, the Chamber could pass a law, that such protest should not discredit either merchant or planter, until the cotton was sold. This, I think, would work well. Now, sir, these views are predicated upon a statement in your last March number, that there is not more cotton made than would be needed for consumption; yet, with this fact before us, we see that the price has gone so low, until what we receive does not pay expenses. The cause has been attributed to the revolution in France; but time has proved this untrue. Up to the 18th of last month, France had taken from your market within twelve thousand of as many bales of cotton as she did the year before, and Great Britain more than twice that amount her usual quantity. What does this prove, but concert of action on the part of manufacturers and a want of concert amongst planters, which can only be effected through our factors? Look at the enormous profits realized by the cotton manufacturer. A few days since, I conversed with a manufacturer from Cincinnati, Ohio, who boasted that he had purchased cotton at 5 cts. per lb. and worked it into sheeting, which he was selling at 6¼ cts. per yard, as fast as he could make it, and *one* pound of cotton made *three* yards of cloth. I would not have the price of cotton advance so as to check consumption, but merely to remunerate labor. Let us examine the effort made last summer, by the bagging manufacturers, to lower the price of hemp. When they stopped work for 60 days the growers of the raw material held on, and, as it were, by concert raised the price from 5 to 5½ cents per lb.; when it was represented, by all calculations, that there was nearly, or quite, enough then manufactured to put up the present crop. Here we have an example of manufacturers contending, by concert, against the planters, and, according to the statistics of your Review, there are many more laborers engaged in working up the raw material, than in producing it; and it would be as ruinous for them to stop their machinery, as for us to quit our fields. Their employers are making enormous profits, and why? Merely by concert of action among the manufacturers of Manchester, and the brokers of Liverpool, who govern the price of cotton over the whole world. Our home manufacturers obey *their* bidding. Now, I think, nothing is needed to give the cotton planter a fair remuneration for his labor, but concert of action, which can only be effected through our factors. Should you deem the views contained in this letter worthy consideration, I would feel gratified for you to publish them, that it might draw public attention to the plan proposed; at the same time, you would lend us the aid of your high position, in carrying out this, or some other plan, for concert of action, to relieve those, whose interest you so ably advocate, from ruin.

With a sincere desire for your success in aiding the planting and great commercial interest of the South, I remain, with the highest consideration, your obedient servant. MILES H. MCGEHEE.

COMMERCE OF THE UNITED STATES, 1848.

Since the establishment of the Review, we have preserved regularly, as our volume will evince, the commercial results of the whole Union, as well as of individual states and cities. From the last Report of the Secretary of the Treasury, we compile

1. DOMESTIC EXPORTS OF THE UNITED STATES, 1848.

Summary statement of the value of the exports of the growth, produce, and manufacture of the United States, during the year, commencing July 1, 1847, *and ending June* 30, 1848.

THE SEA.	
Fisheries—	
Dried fish, or cod fisheries..	$609,482
Pickled fish, or river fisheries (herring, shad, salmon, mackerel)..........	109,315
Whale and other fish oil.....	552,388
Spermaceti oil..............	208,832
Whalebone................	314,107
Spermaceti candles..........	186,839
	$1,980,963
THE FOREST.	
Skins and furs..............	607,780
Gingseng..................	162,647
Product of Wood—	
Staves, shingles, boards, hewn timber............	2,429,863
Other lumber..............	283,133
Masts and spars...........	129,760
Oak bark and other dye....	184,126
All manufactures of wood	2,042,695
Naval stores, tar, pitch, resin and turpentine...	752,303
Ashes, pot and pearl......	466,477
AGRICULTURE.	$7,059,084
Product of animals—	
Beef, tallow, hides, horn. cat.	1,905,341
Butter and cheese.........	1,361,668

Pork (pickled), bacon, lard, live hogs	9,003,272
Horses and mules	190,295
Sheep	20,823
Wool	57,497
Vegetable food—	$12,538.896
Wheat	2,6691,75
Flour	13,194.109
Indian corn	3,837,483
" meal	1,807,601
Rye meal	174,566
Rye, oats, and other small grain and pulse	376,572
Biscuit or ship bread	619,096
Potatoes	876,572
Apples	88,944
Rice	2,331,824
	$25,185,647
Tobacco	7,551,122
Cotton	61,998,294
Hemp	27,657
All other agricultural products—	
Flaxseed	1,584
Hops	17,671
Brown sugar	8 891
Indigo	1,100
MANUFACTURES.	$29.246
Soap and tallow candles	670,223
Leather, boots, and shoes	194,095
Houshhold furniture	297,358
Coaches and other carriages	89,963
Hats	55,493
Saddlery	27,435
Wax	134,577
Spirits from grain	90,957
Beer, ale, porter, and cider	78,071
Snuff and tobacco	568,435
Linseed oil and spirits of turpentine	331,404
Cordage	29,911
Iron—pig, bar, and nails	154,036
" castings	83,188
" all manufactures of	1,022,408
Spirits from molasses	269,467
Sugar refined	253,900
Chocolate	2,207
Gunpowder	125,263
Copper and brass	61,468
Medicinal drugs	210,581
	$4,750,440
Cotton piece goods—	
Printed and colored	351,169
White	4,866,559
Nankeen	2,365
Twist, yarn, and thread	170,633
Al other manufactures of	327,479
Flax and hemp—	
Cloth and thread	495
Bags and all manufactures of	6,218
Wearing apparel	574,834
Combs and buttons	16,461
Brushes	2,160
Billiard tables and apparatus	12
Umbrellas and parasols	2,916
Leather and morocco skins... not sold per pound	16,483
Fire engines and apparatus	7,686
Printing presses and type	20,403
Musical instruments	38,508
Books and maps	75,193
Paper and stationery	78,307
Paints and varnish	50,739
Vinegar	13,920
Earthen and stoneware	8,512
Manufactures of glass	76,007
" tin	12,353
" pewter and lead	7,739
" marble and stone	22,466
" gold and silver and gold leaf	6,241
Gold and silver coin	2,700,412
Artificial flowers and jewelry	11,217
Molasses	5,563
Trunks	6,126
Brick and lime	24,174
Salt	73,274
	$9,586,624
Coal	47,112
Lead	84,278
Ice	75,547
Articles not enumerated—	
Manufactured	1,137,828
Other articles	851,383
	$1,989,211
Grand total	$132,904,121

Total value of Domestic Merchandise exported to each foreign country, distinguishing the amounts shipped in American and foreign vessels, in 1847-8.

Whither exported.	In American vessels.	In foreign vessels.	To each country.	To dominions of each power.
Russia	$998,962	$48,620	1,047,582	$1,047,582
Prussia	......	145,074	145,074	145,074
Sweden and Norway	150,903	475,069	625,972	701,468

Swedish West Indies......	71,052	4,444	75,496	1,041,630
Denmark.................	3,889	160,772	164,551	
Danish West Indies.......	783,196	93,773	876,969	3,856,676
Hanse Towns.............	604.045	3,252,631	3,856,676	
Holland..................	740,363	855,087	1,595,450	2,161,522
Dutch East Indies........	116,767	17,138	133,905	
Dutch West Indies........	293,326	23,340	316,666	
Dutch Guiana............	115,501	......	115,501	
Belgium.................	1,589,899	399,865	1,989,764	1,989,764
England..................	42,784,681	20,143,343	62,928,024	80,306,148
Scotland.................	1,309,457	1,145,969	2.455,426	
Ireland..................	811,192	1,568,099	2,379,291	
Gibraltar................	282,365	28,035	310,400	
Malta....................	33,128	......	33,128	
British East Indies........	510,284	......	510,284	
Cape of Good Hope.......	100,338	......	100,338	
Honduras................	234.857	14,791	249,648	
British Guiana............	534,204	60,910	595,114	
British West Indies........	3,573,012	771,524	4,344.536	
British American Colonies..	2,695,296	3,704,663.	6,399,959	
France on the Atlantic....	12,754,788	1,405,010	14,159,798	15,946,680
France on the Mediterranean	1,151,227	63,860	1,215,087	
French West Indies.......	426,471	42,882	469,353	
French Guiana...........	48·737	......	48,737	
Miquelon & oth. Fr'h. fish's.	33,079	19,787	52,866	
French African ports......	......	839	839	
Spain on the Atlantic......	417,734	180,063	597,797	9,620,243
Spain on the Mediterranean	354,376	1,387,098	1,741,474	
Teneriffe and other Canaries	7,802	2,119	9,921	
Manilla & Philippine Isl'ds.	36,949	......	36,949	
Cuba....................	6,341,147	91.233	6,432,380	
Other Spanish West Indies.	777,551	24,171	801,722	
Portugal.................	54,603	57,657	112,260	328,485
Madeira..................	84,071	26,771	110,842	
Fayal and other Azores....	3,660	......	3,660	
Cape de Verds............	101,723	......	101,723	
Italian ports not specified..	959,136	141,977	1,101,113	1,101,113
Sicily....................	12,131	5,623	17,754	17,754
Sardinia..................	150,708	24,875	175,583	175,583
Tuscany.................	5,197	......	5,197	5,197
Triste, and other Austrian ports on the Adriatic.....	1,370,013	331,482	1,701,495	1,701,495
Turkey, Levant, &c.......	114,830	......	114,830	114,830
Hayti....................	871,899	65,687	937,586	937,586
Mexico..................	1,997,913	97,572	2,095,485	2,095,485
Central Republic of America	29,995	4,945	34,940	34,940
New Grenada............	4,234	74,931	79,165	79,165
Venezuela................	373,327	26,903	400,230	400,230
Brazil...................	2,924,728	168,008	3,092,736	3,092,736
Cisplatine Republic........	272,994	66,865	339,859	339,859
Argentine Republic.......	176,614	32,089	208,703	208,703
Chili.....................	1,703,625	....	1,703,625	1,703,625
China...................	2,063,625	....	2,063,625	2,063,625
Peru....................	113,502	11,116	124,618	124,618
West Indies generally......	129,741	3,220	132,961	132,961
South America generally...	86,385	....	86,385	86,385
Asia generally............	266,452	....	266,452	266,452
Africa generally..........	681,415	89,974	771,389	771,389
South Seas and Pacific.....	305,118	....	305,118	305,118
Total................	$95,544,217	$37,359,904	$132,904,121	$132,904,121

FOREIGN MERCHANDISE EXPORTED FROM THE UNITED STATES.

Value of foreign merchandise exported from the United States to each foreign country during the year ending June 30, 1848.

Whither exported.	Free of duty.	Paying duties ad valorem.	Total value.	To dominions of each power.
Russia	$6,283	$102,145	108,428	$108,428
Prussia	....	15,385	15,385	15,385
Sweden and Norway	852	31,992	32,844	33,644
Swedish West Indies	40	760	800	
Denmark	7,478	9,774	17,252	94,015
Danish West Indies	38,417	38,346	76.763	
Hanse Towns	158,107	307,002	465,109	465,109
Holland	32,991	238,522	271,513	403,131
Dutch East Indies	92,334	15,620	107,954	
Dutch West Indies	9,504	12,643	22,147	
Dutch Guiana	......	1,517	1.517	
Belgium	101,441	98,736	200,171	200,171
England	8,239,857	684,434	8,924,291	11,286,756
Scotland	......	38,419	38,419	
Ireland	......	1,303	1,303	
Gibraltar	29,239	32.306	61,545	
Malta	2,506	13,449	15,955	
British East Indies	56,298	100.417	156,715	
Cape of Good Hope	15,589	4,350	19,939	
British Honduras	4,624	39,557	44,181	
British Guiana	249	1,126	1,365	
British West Indies	12,918	27,429	40,347	
British American colonies	961,900	1,020,796	1,982,696	
France on the Atlantic	3,804,426	473.733	4,278.159	4,466,180
France on the Mediterranean	107,857	58,409	166,266	
French West Indies	7,123	12,948	20,071	
French Guiana	......	1,684	1,684	
Spain on the Mediterranean	6,875	......	6,875	522,992
Teneriffe and other Canaries	970	259	1,229	
Manilla and Philippine Isl'ds	12,696	847	13,543	
Cuba	128,836	335,497	464,333	
Other Spanish West Indies	......	37,012	37,012	
Portugal	......	3,984	2,984	17,240
Madeira	894	6,513	7,407	
Cape de Verds	2,542	4,307	6,849	
Italy	112,951	46,537	159,488	159,488
Sicily	......	9,075	9,075	9,075
Sardinia	7,364	11,025	18,389	18,389
Trieste, &c.	39,096	68,631	107.727	107,727
Turkey, Levant, &c.	79,355	30,966	110,321	110,321
Hayti	16,624	139,605	156.229	156,229
Mexico	34,068	1,924,899	1,958,967	1,958,967
Central America	......	15,438	15,438	15,438
New Grenada	19.907	25,531	45,438	45,438
Venezuela	44,286	18,302	62,588	62,588
Brazil	195,325	84,373	279,698	279.698
Cisplatine Republic	21,225	22,644	43,869	43,869
Argentine Republic	14,165	11,060	25,225	25,225
Chili	9,588	211,298	220,886	220.886
Peru	......	16,731	16,731	16,731
China	72,359	54,029	126.388	126,388
West Indies generally	......	1,337	1,337	1,337
Asia generally	20,460	7,819	28,279	28,279
Africa generally	18,494	42,909	61,403	61.403
South Seas and Pacific Ocean	3,408	64,075	67,483	67,483
Total	$14,551,511	$6,576,499	$21,128,010	$21,128,010
Entitled to drawback	......	2,947,151	2.947,151	....
Not entitled to drawback	14,551,511	759,407	15,310,918	....
From warehouse	......	2,869.491	2,869,941	....

The total value of foreign merchandise exported, as above, from the United States, during the year, amounted to $21,128,010, of which $14,113,714 was shipped in American vessels, and $7,014,296 in foreign vessels.

IMPORTS INTO THE UNITED STATES FROM ALL NATIONS.

Statement of goods, wares, and merchandise imported into the United States from foreign countries during the year ending June 30, 1848.

Whence imported.	Free of duty.	Paying duties ad valorem.	Total.	From dominions of each power.
Russia	$19,394	$1,299,690	$1,319,084	$1,319,084
Prussia	......	22,817	22,817	22,817
Sweden and Norway	1,513	749,304	750,817	764,602
Swedish West Indies	9,627	4,158	13,785	
Denmark	60	19,557	19,617	555,355
Danish West Indies	144,244	391,494	535,738	
Hanse Towns	31,524	6,261,756	6,293,280	6,293,280
Holland	213,222	1,204,686	1,417,908	2,172,166
Dutch West Indies	106,825	346,790	453,615	
Dutch East Indies	156,818	92,528	249,346	
Dutch Guiana	......	51,297	51,297	
Belgium	11,799	1,313,262	1,325,061	1,325,061
England	3,147,298	56,616,204	59,763,502	69,011,085
Scotland	20,900	1,645,794	1,666,694	
Ireland	126,032	289,891	415,923	
Gibraltar	......	4,445	4,445	
Malta	15	369	384	
British East Indies	1,389	2,068,243	2,069,632	
Cape of Good Hope	529	59,902	60,431	
British Honduras	105,802	79,882	185,684	
British Guiana	12,577	11,677	24,254	
British West Indies	464,540	694,023	1,158,563	
British American Colonies	1,228,223	2,418,244	3,646,467	
Ionian Islands	......	15,106	15,106	
France on the Atlantic	340,613	26,719,101	27,059,714	28,287,791
France on the Mediterranean	11,091	1,025,226	1,036,317	
French Guiana	29,741	34,247	63,988	
Miquelon and Fr. Fisheries.	......	733	733	
French West Indies	107,376	19,663	127,039	
Spain on the Atlantic	55,429	221,676	277,105	17,388,307
Spain on the Mediterranean	34,345	885,001	919,346	
Teneriffe and other Canaries	......	35,061	35,061	
Manilla and Philippine Isl'ds	10,382	1,186,645	1,197,027	
Cuba	1,004,446	11,849,026	12,853,472	
Other Spanish West Indies	56,949	2,049,347	2,106,296	
Portugal	3,944	210,838	214,782	225,877
Madeira	......	9,432	9,432	
Fayal and other Azores	784	10,654	11,438	
Cape de Verds	....	225	225	
Italy	58,712	1,557,388	1,616,100	1,616,100
Sicily	5,001	613,028	618,029	618,029
Trieste and Adriatic ports	2,537	383,276	385,813	385,813
Turkey and Levant ports	590	405,438	406,028	406,028
Hayti	1,074,594	292,580	1,367,174	1,367,178
Mexico	865,223	716,014	1,581,247	1,581,244
Central America	......	18,272	18,272	18,272
New Grenada	99,142	114,154	213,296	213,297
Venezuela	636,709	588,902	1,225,611	1,225,619
Brazil	5,998,162	1,994,486	7,992,648	7,992,644
Cisplatine Republic	26,192	496,872	523,064	523,061
Argentine Republic	2,836	1,023,261	1,026,097	1,026,097
Chili	65,834	1,244,617	1,310,451	1,310,456
Peru	76,660	241,099	317,759	317,751
China	6,225,914	1,857,582	8,083,496	8,083,496

West Indies generally	3,358	7,236	10,594	10,594
Asia generally	15,515	239,885	255,400	255,400
Africa generally	100,383	555,202	655,585	655,585
South Seas and Pacific Ocean	1,800	8,160	9,960	9,960
Sandwich Islands	....	6,508	6,508	6,508
Other places	....	371	371	371
Total	$22,716,603	$132,282,325	$154,998,928	$154,998,928

The total value of imports from all countries during the year, as above, amounted to $154,998,928; of which $128,647,232 was received in American vessels, and $26,351,696 in foreign vessels.

EXPORTS TO, AND IMPORTS OF, UNITED STATES FROM ALL NATIONS.

Statistical view of the exports to, and imports from, each foreign country during the year ending June 30, 1848.

Countries.	*Value of* Domestic produce.	*Exports.* For'n produce.	Total.	*Value of imports.*
Russia	$1,047,582	$108,428	$1,156,010	$1,319,084
Prussia	145,074	15,285	160,459	22,817
Sweden and Norway	625,972	32,844	658,816	750,817
Swedish West Indies	75,496	800	76,296	13,785
Denmark	164,661	17,252	181,913	19,617
Danish West Indies	876,969	76,874	953,843	535,738
Holland	1,595,450	271,513	1,866,963	1,417,908
Dutch East Indies	133,905	107,954	241,859	249,346
Dutch West Indies	316,666	22,147	338,813	453.615
Dutch Guiana	115,501	1,517	117,018	51,297
Hanse Towns	3,856,676	465,109	4,321,785	6,293,280
Belgium	1,989,764	200,171	2,189,935	1,325,061
England	62,928,024	8,924,291	71,852,315	59,763,502
Scotland	2,455,426	38,418	2,493,845	1,666,694
Ireland	2,379,291	1,303	2,380,594	415,923
Gibraltar	310,400	61,545	371,945	4,445
Malta	33,128	15,955	49.083	384
British East Indies	510,284	156,715	666,999	2,069,632
British West Indies	4,344,536	40,347	4,384,883	1,158,563
British Guiana	595,114	1,365	596,479	24,254
British Honduras	249,648	44,181	293,829	185,684
Cape of Good Hope	100,338	19,939	120,277	60,431
Mauritius	....	....	....	....
British American Colonies	6,399,959	1,982,696	8,382,655	3,646,467
France on the Atlantic	14,159,798	4,278,159	18,437,957	27,059,714
France on the Mediterranean	1,215,087	166,266	1,381,353	1,036,317
French West Indies	469,353	20,071	489,924	127,039
French Guiana	48,737	1,684	50,421	63,988
French fisheries	52,866	....	52,866	733
French African ports	839	....	839	....
Spain on the Atlantic	597,797	....	597,797	277,105
Spain on the Mediterranean	1,741.474	6,875	1,748,349	919,346
Teneriffe, &c.	9,921	1,229	11,150	35,061
Manilla	36,949	13,543	50,492	1,197,027
Cuba	6,432,380	464,333	6,896,713	12,853,472
Porto Rico	801,722	37,012	838,734	2,106,296
Portugal	112,260	2,984	115,244	214,782
Madeira	110,842	7,407	118,249	9,432
Fayal and the Azores	3,660	....	3,660	11,438
Cape de Verd Islands	101,723	6,849	108,572	225
Sardinia	175,583	18,389	193,972	....
Tuscany	5,197	....	5,197	....
States of the Church	....	....	....	....
Sicily	17,754	9,075	26,829	618,029
Italian States generally	1,101,113	159,488	1,260,601	1,616,100
Ionian Republic	....	....	....	15,106

Trieste, &c.	1,701,495	107.727	1,809,222	385,813
Turkey	114,830	110,321	225,151	406.028
Mexico	2,095,495	1,962,951	4,058,436	1,581,247
Central America	34,940	15,438	50,378	18,272
New Grenada	79,165	45,438	124,603	213,296
Venezuela	400,230	62,798	463,028	1,225,611
Brazil	3,092,736	279,698	3,372,434	7,992,948
Cisplatine Republic	339,859	43,869	383,728	523,064
Argentine Republic	208,703	25,225	233,928	1,026,097
Chili	1,703.625	220.886	1,924,511	1,310,451
Peru	124,618	16,731	141,349	317,759
Bolivia	....	....	....	....
China	2,063,625	126.388	2,190,013	8,083.496
Hayti	937,586	156,229	1,093,815	1,367,174
Europe generally	....	....	....	....
Asia generally	266,452	28,279	294,731	255,400
Africa generally	771,389	61,403	832,791	655,585
West Indies generally	132,961	1,337	134,298	10,594
South America generally	86,385	....	86,385	....
Liberia	....	....	....	....
Pacific Ocean	305,118	67,483	372,601	9,960
Indian Ocean	....	....	....	....
Atlantic Ocean	....	....	....	....
Sandwich Islands	....	....	....	6,508
North-west Coast	....	....	....	....
Uncertain places	....	....	....	371
Total	$132,904,121	$21,132,315	$154,036,436	$154,998,928

Statement of the Commerce of each State and Territory, from July 1, 1847, to the 30th day of June, 1848.

	Value of Exports.			*Val. of Imp'ts.*
	Domestic Produce.	Foreign Produce.	Total.	Total.
Maine	$1,937,006	$20,389	$1,957,395	$795,565
New Hampshire	7,807	436	8,243	61,303
Vermont	299,269	234,833	534,102	306,005
Massachusetts	9,308.337	4,111,362	13,419,699	28,647,707
Rhode Island	215.860	5,771	221,631	351,590
Connecticut	501,064	....	501,064	229,310
New York	38,771,209	14,579,948	53,351,157	94,525,141
New Jersey	62	....	62	1,835
Pennsylvania	5,428,309	304,024	5,732,333	12,147,584
Delaware	83,039	19	83,058	490
Maryland	7,016,034	113,748	7,129,782	5,343,643
District of Columbia	83.666	....	83.666	25,938
Virginia	3,679,858	1,554	3,681,412	215,031
North Carolina	340,028	....	340,028	195,814
South Carolina	8,081,917	....	8,081,917	1,485,299
Georgia	3,670,415	....	3,670,415	217,114
Florida	1,896,683	....	1,896,683	64,267
Alabama	11,920,693	7,056	11,927,749	419,396
Louisiana	39,350,148	1,621,213	40,971,361	9,380,439
Mississippi	....	....	....	....
Tennessee	....	....	....	10,001
Missouri	....	....	....	148,560
Ohio	147,599	....	147,599	186,726
Kentucky	....	....	....	25,971
Michigan	111,194	441	111,635	115,760
Illinois	41,835	....	41.835	4.365
Texas	12,089	131,521	143.610	94,024
	$132,904.121	$21,132,315	$154,036,436	$154,998,928

Statement of the total imports, and the imports consumed in the United States, exclusive of specie, during each fiscal year, from 1821 *to* 1848; *showing, also, the domestic and foreign exports, exclusive of specie, and the tonnage employed during the same periods.*

Years.	Total imports.	Imports consumed in U.S. exclusive of specie.	Domestic produce exp'td exclusive of specie.	For'n mdse. exported exclusive of specie.	To'al exp'ts.	Tonnage.
1821*	$62,585,724	$43,696,405	$43,671,894	$10,824,429	$64,974,382	1,298,958
1822	83,241,541	68,395,673	49,874,079	11,476,022	72,160,281	1,324,699
1823	77,579,267	51,310,736	47,155,408	21,170,635	74,699,030	1,336,566
1824	80,549,007	53,846,567	50,649,500	18,322,605	75,986,657	1,389,163
1825	96,340,075	66,395,722	66,944,745	23,793,588	99,535,388	1,423,112
1826	84,974,477	57,652,577	52,449,855	20,440,934	77,595,322	1,534,191
1827	79,484,068	54,901,108	57,878,117	16,431,830	82,324,827	1,620,608
1828	88,509,824	66,975,505	49,976,632	14,044,578	72,264,686	1,741,392
1829	74,492,527	54,741,571	55,087,307	12,347,344	72,358,671	1,260,798
1830	70,876,920	49,575,099	58,524,878	13,145,857	73,849,508	1,191,776
1831	103,191,124	82,808,110	59,218,583	13,077,069	81,310,583	1,267,847
1832	101,029,266	75,327,688	61,726,529	19,794,074	87,176,943	1,439,450
1833	108,118,311	83,470,067	69,950,856	17,577,876	90,140,433	1,606,151
1834	126,521,332	86,973,147	80,623,662	21,636,553	104,336,973	1,758,907
1835	149,895,742	122,007,974	100,459,481	14,756,321	121,693,577	1,824,940
1836	189,980,035	158,811,392	106,570,942	17,767,762	128,663,040	1,882,103
1837	140,989,217	113,310,571	94,280,895	17,162,232	117,419,376	1,896,656
1838	113,717,404	86,552,598	95,560,880	9,417,690	108,486,616	1,995,640
1839	162,092,132	145,870,816	101,625,533	10,626,140	121,028,416	2,096,479
1840	107,141,519	86,250,335	111,660,561	12,008,371	132,085,946	2,180,764
1841	127,946,177	114,776,309	103,636,236	8,181,235	121,851,803	2,130,744
1842	100,162,087	87,996,318	91,799,242	8,078,753	104,691,534	2,092,391
1842	21,584,599	12,431,376	25,895,451	1,713,112	28,115,493	2,174,863
1843	43,169,200	24,862,753	51,790,903	3,426,298	56,230,987	2,158,603
1844	108,435,035	96,390,548	99,531,774	6,214,058	111,200,046	2,280,095
1845	117,254,564	105,599,541	98,455,330	7,584,781	114,646,606	2,417,002
1846	121,691,797	110,048,859	101,718,042	7,865,206	113,488,516	2,562,085
1847	146,545,638	116,258,310	150,574,844	6,166,039	158,648,622	2,839,046
1848	154,977,876	127,490,012	130,203,709	7,986,806	154,032,131	3,150,502

* From 1821 to 1842 the amounts are to September 30. They are then given for the last three months of 1842; then for first six months of 1843 to 30th June. The years 1844, '45, '46, '47, '48, are to the 30th June, from 1st July, each.

Aggregate value of Breadstuffs and Provisions exported each year, from 1821 *to* 1848, *inclusive.*

Years.	Value.	Years.	Value.
1821	$12,341,901	1835	$12,009,399
1822	13,886,856	1836	10,614,130
1823	13,767,847	1837	9,588,359
1824	15,059,484	1838	9,636,650
1825	11,634,449	1839	14,147,779
1826	11,303,496	1840	19,067,535
1827	11,685,556	1841	17,196,102
1828	11,461,144	1842	16,902,876
1829	13,131,858	1843	11,204,123
1830	12,075,430	1844	17,970,135
1831	17,538,227	1845	16,743,421
1832	12,424,703	1846	27,701,121
1833	14,209,128	1847	68,701,921
1834	11,524,024	1848	37,472,751
			$471,000,405

TONNAGE OF THE UNITED STATES.

		Tons.
Aggregate tonnage, 30th June, 1848		3,154,041
Of which permanent registered	1,067,976	
" temporary "	292,910	
Total registered		1,660,886
Permanent enrolled	1,691,327	
Temporary "	56,304	
		1,747,631
Licensed under 20 tons coasting	38,328	
" " " Cod Fishery	7,196	
		45,524
Total tonnage		3,154,041
Of the enrolled and licensed in coasting	1,620,988	
In Mackerel Fishery	483,558	
In Cod "	82,651	
In Whale "	432	
Total		1,747,629

The Whale Fishery employs in all about 192,000 tons, and steam navigation 411,823 tons in coasting trade.

ADULTERATED DRUGS.

The Inspector of Drugs, at New York, under the late act of Congress, reports that he rejected as base and spurious, in six months, the following: 6,650 lbs. *rhubarb root*, from Canton, 2,249 lbs. from London, 645 lbs., 768 lbs. and 185 lbs. also from London; 545 lbs. from Hamburg; 878 from Canton; 1075 from Marseilles; *Opium*, 931 lbs., 750 lbs. from Marseilles; 758 lbs., 156 lbs. from London; 2,940 lbs. *jalap* from Tampico; 875 lbs. and 3,400 lbs. from Vera Cruz; 1414 lbs. *gamboge*, from London; 1,400 lbs. *senna*, from Leghorn; *yellow bark*, 2,900 lbs. 1,875 lbs. from Bordeaux; 13,120 lbs. from Marseilles; *iodine*, 1,783 oz., 1,280 oz. from London; *gum myrrh*, 227 lbs., 412 lbs., 1,065 lbs. from London; 12,800 lbs. *Cinchona bark*, from Carthagena.

2. PRODUCTS UNITED STATES, 1848.*

TABLE, *exhibiting an estimate of the value of the products of the labor and capital of the United States in the year* 1848.

Descriptions.	Quantities.	Price.	Value.
Wheat	126,364,000	$1 15	145,319,190
Indian Corn	583,150,000	59	344,058,500
Barley	6,222,050	65	4,044,332
Rye	32,957,500	65	21,418,475
Oats	185,500,000	35	64,925,000
Buckwheat	12,533,000	50	6,266,500
Potatoes	114,475,000	30	34,344,500
Beans	10,000,000	1 00	10,000,000
Peas	20,000,000	87½	17,500,000
Flaxseed	1,600,000	1 20	1,920,000
Hay (tons)	15,735,000	8 00	125.880,000
Hemp and Flax	100,000	180 00	18,000,000
Tobacco (lbs)	218,909,000	04	8,756,000
Cotton	1,066,000,000	07	74,620,000
Rice	119,199,000	03	3,575,985
Sugar (including Maple)	275,000,000	05	13,750,000
Silk Cocoons	400.000	2 00	800,000
Hops	1,566,000	09	140,967
Beeswax	789,525	21	165,800
Honey	23,685,750	10	2,368,000

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* From the able report of the late Commissioner of Patents, Mr. Burke.

Molasses (gallons)	9,600,000	28½	2,736,000
Wine	500,000	1 00	500,000
Pasturage (annual value)			60,768,136
Value of the residuum of crops—Straw, Chaff and Manure			100,000,000
Products of the Orchard—Value in 1840	$7,256,904		
Increase 25 per cent.	1,814,226		9,071,130
Products of Gardens—Estimated number 3,000,000—Annual value estimated at $15 each			45,000,000
Product of Nurseries—Value in 1840	593,534		
Increase 25 per cent.	148,383		741,917
Sheep in 1848	25,000,000		
Wool (lbs.)	60,000,000	30	18,000,000
Neat Cattle in 1848	18,714,482		
Swine, number in 1848	35,000,000		
Butcher's Meat—including Mutton, Beef and Pork	3,664,934,000	04	146,597,360
Value of Hides, Tallow, &c.			20,000,000
Increase of Neat Cattle in 1848, estimated at 3 per cent., of the sum in 1847, 449,147, valued at $10 per head			4,491,470
Horses, Mules and Asses—Number in 1840	5,419.586		
Increase 25 per cent. (labor not estimated).			8,129,350
Poultry—Value in 1840.	9.344,110		
Increase 25 per cent.	2,336,102		11,680,512
Eggs, number cousumed	1,084,300 000	½	5.421,500
Live Geese Feathers (lbs.)	2,000,000	50	1,000,000
Products of the Dairy—Value in 1840	33,787,008		
Increase 25 per cent.	8,446,750		42,233,758
Milk—Value of			20,000,000
Products of the Forest—Including Timber, Furs and Skins			22,250 000
Fire-wood	25,000,000	1 50	17,581,339
Capital employed in Commerce, Trade and Internal Transportation	$400,000,000		
Profits at 6 per cent.			24,000,000
Manufactures—Products, value of			550,000,000
Mines—Products of, including Iron, Lead, Gold, Silver, Marble, Granite, Salt, Coal, &c.			75,000,000
Bank Capital	212,000,000		
Insurance—Capital of	not known.		
Profits of			20,000,000
Profits of money loaned on interest			25,000,000
Rental of Houses and Lands			50,000,000
Professions—Profits of			50,000,000

RECAPITULATION.

Total value of Crops	$1,119,866,420
" " Orchards and Gardens	54,813,047
" " Live Stock and its products	277,553,950
" " Products of Forests	59,750,000
" " Products of Fisheries	17,581,339
" " Commerce and Manufactures	574,000,000
" " Mines	75,000,000
" " Banking, Insurance and Interest on Money	45,000,000
" " Rental	50 000 000
" " Professions	50,000,000
Grand Total	$2,323,564,758

3. THE LAST PATENT OFFICE REPORT.

In taking leave of the able gentleman who has presided for four years over this department of government, we can only express the hope that his successor will prove as efficient and energetic, and carry out the good works that have been begun.

We take the following interesting tables, &c., from Mr. Burke, who says: "This office is under great obligation to the intelligent gentlemen who have so promptly and fully responded to its inquiries. And particularly is it indebted to J. D. B. De Bow, Esq., of New Orleans, Charles Cist, Esq., of Cincinnati, B. P. Johnson, Esq., of Albany, M. B. Batchem, Esq., of Columbus, Ohio, J. Delafield, of Seneca county, N. Y., T. Marshall Painter, Esq., of Lucerne, Pa., and N. J. Wythe, Esq., of Cambridge, Mass., for interesting and valuable communications."

Year.	Number of applications.	Number of caveats.	Number of patents issued.	Amount received for duties and fees.	Balance carried to Patent fund, after deducting expenditures, exclusive of money paid for restoring models, &c.
1841......	847	312	495	$40,413 01	$8,253 84
1842......	761	291	545	36,505 63	5,292 20
1843......	819	315	531	35,315 81	4,588 85
1844......	1,045	380	502	42,509 26	6,164 79
Total.....	3,472	1,298	2,073	154,743 71	24,299 68
1845......	1,246	380	511	51,076 12	11,680 49
1846......	1,272	448	619	50,264 16	4,105 45
1847......	1,531	533	572	63,111 19	21,232 84
1848......	1,628	607	660	67,576 69	8,670 85
Total.....	5,677	1,968	2.362	232,028 16	45,689 63
	3,472	1,298	2.073	154,743 71	24,299 68
Excess....	2,205	670	289	77,284 45	21,389 95

Statistical Bureaus.

In the pursuit of its statistical investigations, this office has keenly felt the want of means for obtaining accurate and reliable information concerning the great industrial interests of the country. No provision has been made by the general government for obtaining such information, except in relation to the foreign commerce of the country; and but very few of the States have adopted measures for obtaining authentic information in relation to their industrial interests. Massachusetts and Louisiana are in advance of most other States in their legislation upon these subjects. In the former State, very full returns are obtained, in small periods of a few years, if not annually, of its industry and resources; and in the latter, a bureau of statistics has been established, at the head of which has been placed one of her most intelligent and talented citizens.

A most interesting view of the vast resources of this great republic, would be annually exhibited, if all the States should follow the example of Louisiana and Massachusetts. The statesman and legislator, to whom the people commit the destinies of their common country, would then have at their hands ample material to aid them in the intelligent discharge of their momentous and responsible duties, without which they are like blind men feeling their way in the dark.

Cultivation of Sugar Cane, etc.

As a commencement of this system of investigation, I employed an intelligent and able gentleman, Charles L. Fliechmann, Esq., to visit Louisiana during the last season, to make inquiry into the condition and progress of the sugar culture in that State. He has accomplished, in part, the object for which he was sent, and has presented to me a most valuable report, which will be found in the appendix to the agricultural report, marked No. 2.

As the time which was allotted to him for the execution of the investigation committed to his charge, was not sufficient to enable him to complete his inquiries, it will be necessary for him to resume his labors during the approaching season. His report, although necessarily incomplete, it is believed contains much valuable information which will be interesting to the public at large, and particularly useful to the intelligent and enterprising citizens who are engaged in the sugar culture in this country. The circulars sent out from this office, soliciting information upon the subject of agriculture, were very full and minute in the inquiries which they embodied, and the replies to them. Many of them, equally minute, contain a large amount of valuable and interesting information, which will be found embodied in the agricultural report and appendix.

4. SEA AND RIVER SHORE OF UNITED STATES.

Col. Abert, of the Topographical Engineers, thus answers to the questions of government:

Question 1. "The extent of shore line of each of the rivers of the United States, as far as navigable for steamboats of the lightest draft now used, designating the extent of shore line of each principal river and its tributaries."

Answer. Shore line of rivers, to head of tide water, from Maine to Texas. The head of tide water is assumed as the limit of steamboat navigation, as impeding falls or rapids are usually encountered at that point, above which many of our rivers are adapted to steam navigation, but to what extent is not sufficiently known .... 10,501 miles.

Shore line of rivers of Texas	1,210	"
Mississippi (lower) islands and bayous	8,372	"
Mississippi (upper) and tributaries	2,736	"
Big Black, Yazoo, and bayous	1,190	"
Red river and tributaries	4,924	"
Arkansas river and tributaries	3,250	"
Missouri river and its tributaries	7,830	"
Ohio river and tributaries	7,342	"
Total miles, including both banks of rivers	47,355	"

Question 2. "The extent of frontier of the United States, bordering on the British possessions."

Answer. From the mouth of the St. Croix to the Pacific ocean, by treaty lines, 3,303 miles.

Question 3. "The extent of frontier of the United States, bordering on Mexico."

Answer. From the mouth of the Rio Grande to the Pacific ocean, by treaty lines, 1,456 miles.

Question 4. "Extent of shore line of the northern lakes, including bays, sounds, and islands."

Answer. American coast, or shore line	3,620	miles.
British coast, or shore line	2,620	"
Total miles	6,240	

PROGRESS OF THE SOUTHERN STATES.

1. SLAVE AND FREE NEGRO LAWS OF THE SOUTHERN STATES.

South Carolina.—We have had various inquiries for such a publication, from a great many quarters, and are determined to commence it. It will be seen by the letter in our present number, from an intelligent gentleman of Cuba, how anxious the people of that island are now to obtain information upon the subject, so as to regulate their own systems.

We shall ourselves prepare an abstract of the *Louisiana* slave laws, unless some other legal gentleman will relieve us of the task. We also invite contributions upon the slave laws of the other southern states from the Profession, and feel assured, they will in this way greatly serve our southern country.

We publish now a few pages, from an able pamphlet on the negro laws of South Carolina,

sent us by our distinguished friend, Hon. J. Bellon O'Neall, the author. It was prepared by request of "Carolina Agricultural Society." Our intentions are to publish the pamphlet in parts, in successive numbers of the Review, if the proprietor, Mr. John G. Bowman, of Columbia, who has the copyright, will permit. It will not certainly injure his sale, and will extend the usefulness of Judge O'Neall's labors.

The Status of the Negro, his Rights and Disabilities.

Section 1. The act of 1740, sec. 1, declares all negroes and Indians (free Indians in amity with this Government, negroes, mulattoes and mestizoes, who now are free, excepted) to be slaves: the offspring to follow the condition of the mother: and that such slaves are chattels personal.

Sec, 2. Under this provision it has been uniformly held, that color is prima facie evidence, that the party bearing the color of a negro, mulatto or mestizo, is a slave: but the same prima facie result does not follow from the Indian color.

Sec. 3. Indians, and descendants of Indians, are regarded as free Indians in amity with this Government, until the contrary be shown. In the second proviso of sec. 1, of the act of 1740, it is declared that "every negro, Indian, mulatto and mestizo is a slave, unless the contrary can be made to appear"—yet, in the same it is immediately thereafter provided—"the Indians in amity with this government excepted, in which case the burden of proof shall lie on the defendant," that is, on the person claiming the Indian plaintiff to be a slave. This latter clause of the proviso is now regarded as furnishing the rule. The race of slave Indians, or of Indians not in amity to this Government (the State), is extinct, and hence the previous part of the proviso has no application.

Sec. 4. The term negro is confined to slave Africans (the ancient Berbers) and their descendants. It does not embrace the free inhabitants of Africa, such as the Egyptians, Moors, or the negro Asiatics, such as the Lascars.

Sec. 5. Mulatto is the issue of the white and the negro.

Sec. 6. When the mulatto ceases, and a party bearing some slight taint of the African blood ranks as white, is a question for the solution of a jury.

Sec. 7. Whenever the African taint is so far removed, that upon inspection, a party may be fairly pronounced to be white, and such has been his or her previous reception into society, and enjoyment of the privileges usually enjoyed by white people, the jury may rate and regard the party as white.

Sec. 8. No specific rule, as to the quantity of negro blood which will compel a jury to find one to be a mulatto, has ever been adopted. Between one-quarter and one-eighth seems fairly to be debatable ground. When the blood is reduced to, or below one-eighth, the jury ought always to find the party *white*. When the blood is one-quarter or more African, the jury must find the party a mulatto.

Sec. 9. The question of color, and of course of caste, arises in various ways; and may, in some cases, be decided without the intervention of a jury. As when a party is convicted and brought up for sentence, or a witness on the stand objected to as a free negro, mulatto, or mestizo, in these cases, if the color be so obvious that there can be no mistake about it, the judge may refuse to sentence, or may exclude the witness; still, if the party, against whose color the decision may be made, should claim to have the question tried by a jury, it must, I apprehend, be so tried.

Sec. 10. There are three classes of cases, in which the question of color, and of course, of caste, most commonly occurs. 1st. Prohibition against inferior courts, or the tax collector. 2d. Objections to witnesses offered to testify in the superior courts. 3d. Actions of slander for words charging the plaintiff with being a mulatto.

Sec. 11. In the first class, free negroes, mulattoes and mestizoes, are liable to be tried for all offenses, by a magistrate and five free holders (except in Charleston, where two magistrates must sit), and of course, any person claiming to be white (over whom, if that be true, they have no jurisdiction), charged before them criminally, may object to their jurisdiction, and if they persist in trying him or her, may apply for, and on making good the allegation, is entitled to have the writ of prohibition. It seems if the party submits to have the question of jurisdiction tried by the Inferior Court, he will be concluded.

Sec. 12. The writ of prohibition is generally granted, nisi, on a suggestion sworn to by the relator, by any judge at Chambers, on notice being given to the court claiming jurisdiction; but if the fact be uncontroverted, or so plain as not to admit of doubt, that the relator is white, the judge may at once grant an absolute prohibition. Generally, however, an issue is ordered to be made up on granting the prohibition, nisi, in which the relator is plaintiff, and on the jury finding the relator to be a free white person, the prohibition is made absolute.

Sec. 13. In this class, too, the tax collectors frequently issue tax executions for capitation taxes, against persons whom they suppose to be free negroes, mulattoes, or mestizoes ("free persons of color," as they are sometimes loosely called). If the person or persons against whom they be issued, be not liable to the tax, they may, on a suggestion, move for and have the writ of prohibition.

Sec. 14. In such cases, where, from the affidavits accompanying the suggestion, it appears that the relator or relators has or have been received in society as white, and has or have enjoyed the privileges of a white person, or of white people, I have uniformly made the order for prohibition to become absolute, if the tax collector did not within a given time, file his suggestions contesting the status of the relator or relators. This course has been adopted, because the tax collector has no jurisdiction over the person of the relator, and has no judicial authority whatever, to decide the question of caste. His execution is predicated of an assumed fact. He is, therefore, bound to make that good, before he can collect the tax. This course has been found extremely convenient, as it has cut off an immense amount of litigation. For, generally, the tax collectors exercise a sound and honest discretion, in pursuing only those cases where there seems to be no room to doubt the degraded caste of the relator or relators.

Sec. 15. Where, however, there is to be a question as to the color of the relator or relators, the court may, in its discretion, cast the burden of proof on the tax collector, or the relator. Generally, I think, it should be cast on the tax collector, as his execution is the first allegation of the color of the relator. As the issue may result, the writ of prohibition is made absolute or dissolved.

Sec. 16. In all the cases of the first class, the decision is conclusive; in all subsequent cases, civil or criminal. For the prohibition is in the nature of a criminal proceeding, operating *in rem*, and binds not only the parties, but also all the people of the commonwealth. So it seems, that any decision made in favor of the caste of the relator, as white, may be given in evidence in his favor.

Sec. 17. In the second class, the objection to the competency of the witness, makes the issue collateral, and it is tried instanter, without any formal issue being made up, and the finding is upon the record on trial. The verdict, in such a case, concludes nothing beyond the question of competency in that case. It, however, might be given in evidence for or against the witness, not as conclusive, but as a circumstance having weight in settling the question of status, in all other cases.

Sec. 18. In the third class, where jurisdiction is pleaded and found, it would seem to forever conclude the plaintiff from re-agitating the question. But, where the defense is as usual, that the defendant had good reason to suspect and believe that the plaintiff was, as he alleged, a mulatto, in such case, a finding of nominal damages sustains the defense, yet it concludes not the plaintiff from afterward averring and proving that he was white.

Sec. 19. Free Indians and their descendants, unmixed by African blood, are entitled to all the privileges of white men, except that of suffrage and office. The former, and of consequence the latter, has been denied to a pure Indian, living among the whites. The foregoing principle resulting from the case cited in the margin, is, I am persuaded, wrong. The term white ("free white man"), used in our constitution, is comparative merely: it was intended to be used in opposition to the colors resulting from the slave blood. The case should be reviewed, and I trust the decision will be reversed; for the case in which it was made, will always condemn it. The relator, the Rev. John Mush, was an Indian, of the Pawmunki tribe of Indians, in Virginia; he was a soldier of the revolution, he had as such, taken the oath of allegiance. He was sent out as a missionary to the Catawbas. He, however, did not reside among them; he lived among the white inhabitants of York District, where he had resided for many years. He was a man of unexceptionable character. Yet, strange to say, he was held not to be entitled to vote. If that decision be right, how long is the objection to prevail? When is the descendant of an Indian to be regarded as white? Is it, that he is not to be so regarded, until a jury shall find him to be white, on account of the great preponderance of the white blood? But the Indian blood, like that of the white, is the blood of freedom; there is nothing degrading in it; and hence, therefore, the Indian and his descendants may well claim to be white within the legal meaning of our constitution.

Sec. 20. A Mestizo is the issue of a negro and an Indian, and is subject to all the disabilities of a free negro and mulatto.

Sec. 21. The burden of proof of freedom rests upon the negro, mulatto, or mestizo, claiming to be free.

Sec. 22. Under the act of 1740, 1st sec., 1st proviso, and the act of 1799, it is provided, if any negro, mulatto or mestizo shall claim his or her freedom, he may, on application to the clerk of the Court of Common Pleas of the District, have a guardian appointed, who is authorized to bring an action of trespass, in the nature of ravishment of ward, against any person claiming property in the said negro, mulatto or mestizo, or having possession of the same; in which action, the general issue may be pleaded, and the special circumstances given in evidence; and upon a general or special verdict found, judgment shall be given according to the very right of the case.

2. MOBILE AND OHIO RAILROAD.

To Sydney Smith, Esq., President Mobile and Ohio Railroad:

Dear Sir—Having made a partial reconnoisance of the country between the Ohio river and Mobile; and having organized and placed in the field four efficient parties of surveyors, who are now actively engaged in running the necessary lines to determine the best location of the railroad, it may be agreeable to you, and useful to your company, to receive from me some general remarks upon the practicability and character of the great work you have undertaken. These I am happy to make, in advance of a detailed report upon the results of the surveys, in consequence of the misapprehension existing along the route, and, to some extent, even in Mobile, in relation to the ability of the people to build the road at this time, and to its capacity as a labor-saving machine.

First. The country throughout the whole distance is of the secondary alluvial formations, exhibiting but few points of rock excavation, and these of the softest kind of limestone and sandstone. Its surface is moderately undulating, but where the road will naturally cross the dividing ridges does not exceed 250 to 300 feet above the nearest navigable waters of the Tennessee, or Tombigbee rivers. Nor will the road be, at the highest point, over 650 to 700 feet above the tide water at Mobile. Very little stone, fit for masonry, can be found; but materials for bricks and timber in the greatest abundance, are everywhere convenient and suitable for railroad structures. In fact, the country under examination, topographically and geographically, is very favorable for the construction and use of a railway.

Second. In consequence of the slight elevations to be overcome, and the otherwise general feasibility of the country for the railroad in the north and south direction, the gradients and curves can be made, by a careful location, of easy passage, so that the speed and effective power of the engines may be greater upon your road, other things being equal, than upon any other line of equal extent in the United States. Going south, we hope to have no gradients to exceed thirty feet per mile, or north, over forty feet; and the shortest curve not less than 1432 feet radius. With these natural facilities for construction, and the certainty of taking a fair portion of the immense traffic of the Mississippi and of its northern and eastern tributary valleys—also, the whole of the local business of the extensive agricultural country through which the road will pass—you can have no apology for building any other than a permanent, *first class* road—one as good as the best in the north-eastern states. With this view, a location, plans and estimates, will in due time be presented, which, if carried out, cannot fail to give the following results, viz:

Time of transit of passenger trains *through*	20	hours.
do. do. freight, do. do.	40	do.
Gross load of 20 ton engine going south on on max. grade of 30 feet	400	tons.
Of which will be merchandise	236	do.
Gross load of same engine going north on max. grade of 40 feet	330	do.
Of which will be merchandise	194	do.

On a road of this character, passenger fares will range from 2½ to 3½ cents per mile, inversely to the distance traveled. Freight charges 1½ to 3 cents per ton per mile, for agricultural products, salt, lime, plaster, &c., and 2½ to 5 cts. per ton per mile for imported merchandise. All freight charges being proportioned directly to the value, risk, and bulk of the articles, and inversely to the distance transported.

The following table of comparative loads on different inclinations, will show the value of reducing the maximum gradients to the lowest practicable limit:

	LOAD ON ASCENT OF						
	Load. level. tons.	10 ft. p. m. tons.	20 ft. p. m. tons.	30 ft. p. m tons.	40 ft. p. m. tons.	50 ft. p. m. tons.	60 ft. p. m. tons,
Gross loads 24 tons engines	1,000	672	502	400	330	280	243
Net loads of merchandise	587	396	296	236	194	166	142

Hence the cost of traction per ton on a load, compared with the gradients mentioned in the table, will be in the ratio of 1—1,49—1,98—2,49—3—3,53 and 4,13. Every person can see from this the importance of the low gradients as an element of cheap freights; also, of a *strong iron rail*, without which a smooth road surface cannot be maintained even on a level gradient.

Third. The great benefits of this road to the country to be traversed by it, will be fully proved by enabling the agriculturists of western Kentucky and Tennessee, and northern Mississippi and Alabama, to crop their fields and place their products in the Mobile market twelve to twenty days earlier than can be done from the states north of the Ohio; and also, by furnishing the citizens of Mobile and the planters of the whole cotton growing region of eastern Mississippi and western Alabama, with their supplies of provisions directly from the north, at all seasons of the year, and over an average distance of 200 to 400 miles, instead of 1500 to 1800 miles, as is now the practice, via the Ohio, Mississippi and Tombigbee rivers.

The soil on nearly four-fifths of the entire route, is, on the average, as rich and fertile as any in the western country, and, in consequence of its distance from market, is now but partially cultivated; that it will be thickly settled and greatly enhanced in value by your road cannot be doubted. Of this enhancement of value, I venture to give you the following estimate:

Miles.	Acres.		Average.
1st. each side of the road	450,000	$5	$2,250,000
2d	450,000	4¾	2,137,500
3d	450,000	4½	2,025,000
4th	450,000	4¼	1,912,500
5th	450,000	4	1,800,000
6th	450,000	3¾	1,688,500
7th	450,000	3½	1,565,000
8th	450,000	3¼	1,462,500
9th	450,000	3	1,350,000
10th	450,000	2¾	1,237,500
11th	450,000	2½	1,125,000
12th	450,000	2¼	1,012,500
13th	450,000	2	900,000
14th	450,000	1¾	787,500
15th	450,000	1½	675,000
16th	450,000	1¼	562,500
17th	450,000	1	450,000
18th	450,000	¾	337,500
19th	450,000	½	225,000
20th	450,000	¼	115,500
Pine region and ridge lands	2,300,000	½	1,150,000
	11,500,000		$24,769,000

Judging from the effect of railroads elsewhere upon the value of real estate, one-half of this increase will be realized in five years, and the whole within fifteen years after the road shall have been completed.

Fourth. Are the people of the country adjacent to the route sufficiently numerous and in condition to make the road in the next five years? I believe they are; and could they all be induced to unite in contributing to the work by taking stock in proportion, respectively, to their taxable property, real and personal, the road would be completed in two and a half years, instead of five, or any longer period. In proof of this, it is only necessary to state, that there are at this time, not less than seventy-eight thosand men, white and black, living within two tiers of counties on the route. About sixty-three thousand of these are in the condition of laborers, while the other fifteen thousand are occupied in professional and mercantile callings, as large landed proprietors, or gentlemen of fortune and leisure—each and all able to pay for the labor of others. We may, therefore, consider the country capable of furnishing *continuously*, for all departments of the work, one-eighth of its entire manual strength, say 9750 men; and as many horses as may be needed. In two and a half years these men should work 625 days each, which will give in the aggregate 6,093,750 days' work; two-thirds of this labor will probably be required on the grading, bridges, and permanent fixtures of the road, and the remaining one-third will consist of foreign labor expended in making the iron and machinery, and transporting the same to the line. Without going at this time into a calculation of the actual amount of work to be done, which must be determined by the survey now in progress, I assume, for this argument, that about an average of 13,200 days' work of men, and 5,000 of horses, may be required per mile, to complete the road and stock it with buildings, cars and engines; making an aggregate for the whole route of 6,072,000 days' work of men and 2,300,000 days' work of horses. The manual portion being less than one-eighth of the present labor of the country contiguous to the route for the period of two and a half years. Let then the local and laboring people, with their cattle, build the roadway, permanent fixtures, and lay the track; and the 15,000 other citizens, who hold and control capital, furnish the iron and machinery.

This will be a simple application of the principle of associate labor of men and capital, which has been so vastly beneficial to the northern and middle states; the fruits of which are *honorable and useful employment, common interests, prosperity and happiness*, to all classes of the people.

In nature the ant and the bee beautifully exemplify the same beneficent idea. Apply it to your present enterprise, and every man interested will be astonished to behold how much can be accomplished in a short time, even during the waste days of a single winter. From what I have seen of the people of the interior, they are exceedingly anxious to have the road, and will be well disposed to associate for their portion of the work, as above suggested. They all know that "many hands make light work."

Fifth. The work of making the road belongs to the people who are to reap the benefits of it; at least *three-fourths* of it; thereby creating a property upon which one-fourth of the entire cost may be borrowed for a time, if necessary or convenient, until the road, by invigorating industry of all kinds and producing a revenue, may entirely pay for itself. But, if what I have said of the labor of the country and the mode of combining it with capital in this work be true, there will be little need of borrowing. So long, however, as the idea is entertained of foreign aid in raising the first three-fourths of the stock, the completion of the road will be delayed.

Sixth. The route now under survey is that mainly recommended by Mr. Troost; passing through portions of Ballard and Hickman counties, Kentucky; Obion, Gibson, Madison, McNairy, Hardin and Hardiman counties, Tennessee; Tishamingo, corner of Pontotoc, Itawamba, Munroe, Lowndes, Noxubee, Kemper, Lauderdale, Clarke and Wayne counties, Mississippi; and Washington and Mobile counties, Alabama.

Another general route is worthy of particular consideration, and is as follows: diverging from the first route in Obion county, Tennessee; thence through portions of Gibson, Haywood and Fayette counties, Tennessee; Marshall, Fayette, Chickasaw, Choctaw, Winston, Neshoba, Newton, Jasper, Clarke and Wayne counties, Mississippi; and Washington and Mobile counties, Alabama; joining the other route again in the valley of the Escatawpa. These two routes, denominated the *Eastern* and *Western*, are the most favorable that the country presents, and the thorough examination now under way will enable me to report upon their comparative merits.

Very respectfully and truly, I am your obedient servant,

Columbus, Ken., Jan. 5, 1849. JOHN CHILDE, *Chief Engineer.*

3. SOUTH CAROLINA INSTITUTE.

We hail with delight the establishment of such an institute in our neighbor city of Charleston, and trust to see the example imitated everywhere. The able and lucid address before the Institute, by Messrs. Taylor, Walker and Thomson, shall have a place in the next number of our Review.

The South Carolina Institute, for the Promotion of Arts, Mechanical Ingenuity and Industry.—The first Annual Fair of the above Institute will be held in Charleston, commencing on Wednesday, 17th October next, and continue open during the week.

Specimens of Art, Ingenuity, Mechanical Skill and Industry, of every description, are solicited for the Exhibition, and *Premiums* will be awarded to those presenting the best specimens.

A list of the Premiums to be awarded will be published at an early day.

All those who intend sending articles for exhibition, will please give notice to the Committee of Arrangements, at an early day as possible, and every specimen sent will be carefully attended to by the Committee of arrangements.

Officers of the Institute.

WM. GREGG, President.

WM. KIRKWOOD, 1st Vice President,
WM. M. LAWTON, 2d Vice President,
E. C. JONES, Secretary,
L. A. EDMONSTON, Treasurer.

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Joseph Walker,
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L. M. Hatch,
C. D. Carr,
H. D. Walker,
F. J. Porcher,
D. N. M'Intosh,
C. Y. Richardson,
Wm. Lebby.

4. AGRICULTURE, COMMERCE, AND MECHANIC ARTS IN SOUTH CAROLINA.

Richard F. Reynolds, Esq., chairman of a special committee appointed by the Legislature of South Carolina, made a valuable report to that body, upon the propriety of appointing a regular "Standing Committee on Commerce," etc., in the Legislature. Mr. Reynolds deserves great credit for his exertions, in this respect, and in many others bearing upon the industrial progress of the South. His idea of a *Bureau of Statistics*, in South Carolina, as in Louisiana, is what we desire to see in all the states of the Union, very soon.

It is a fact scarcely to be credited, that whilst within sight of this building, there are beds of the noblest granite in the world, the very pillars of our Capitol gates, of similar material, have been brought from abroad—transported a thousand miles by sea, and more than a hundred miles by land; that whilst we have lime formations in abundance, the walls of our dwellings are cemented by like materials, brought from an equally distant region; that whilst we have iron, the very best in the world, gold, copper, lead, precious stones, white and variegated marbles, of fine quality and susceptible of the highest polish, freestone, slate, plumbago, chalk, lithic paints, sulphur, asbestos, porcelain clay, and many other mineral productions, which might be prepared for use, and rendered productive of great profit, they are suffered, for the most part, to remain in their natural state, unappreciated and unused. But a new era is breaking upon us, and we are beginning to avail ourselves of those natural advantages which Providence has placed within our reach. We have discovered that cotton can be manufactured at a much less cost here than at Lowell or Manchester—that whilst our labor is cheaper, we are supplied with the raw material at smaller cost, and that therefore we can, without the protection of federal tariffs, compete successfully with others in the markets of the world, and enrich ourselves with ample profits. It has become apparent, too, that mechanical pursuits of almost every description, can be conducted with greater profit here than in more northern latitudes, not only on account of the advantages arising from a more liberal dispensation of solar light and heat, but from the greater cheapness of the means of subsistence; and it is only necessary for capital, with her magic wand, to call into being those establishments which concentrate and economize mechanical labor, in order to render us entirely independent in this respect. And commerce, too—commerce is opening to us new avenues of wealth. Within a brief period we were consumers of northern flour; now we are the exporters of it to the extent of thousands of barrels, and it is only necessary for us to comply, by legislative enactments regulating its inspection, with those imperative demands of foreign commerce, which the merchant suggests, and which he only can intelligently direct, in order to facilitate its sale in the markets which he has found for you. It is well known, that on all the flour now produced in this state, and sent to the sea board, an average loss of one dollar per barrel is sustained by the agriculturist or the miller, in consequence of non-compliance with the inspection laws of the world, which require the packages to be of peculiar character—their capacity perfectly uniform—and the qualities duly classified and certified—a loss which might be entirely saved, by decreeing those wholesome regulations against which the clamors of the ignorant are raised, because they impose an inspection tax, as it is called, of five cents per barrel. It is a fact so entirely notorious, as hardly to be worthy of reiteration, that southern flour is better than northern, and the only drawback to its profitable sale in foreign markets, is in consequence of neglect of those inspection laws which the merchant dictates, and the necessity of which is forced upon his convictions by actual experience of their importance. No wonder that your Judiciary Committee, who were charged with the consideration of a bill of this character, have felt themselves constrained to ask its transfer to another committee; and it will not be surprising if your Committee on Agriculture come to the conclusion that a bill of that sort is as far removed from the appropriate sphere of their duties, as of that of the Judiciary. It is a Commercial Committee you need for such matters, and if the membership of this House does not furnish merchants, the committee would be not the less able to arrive at an enlightened decision in all such cases, inasmuch as that class of citizens would place within their reach all such information as might be necessary or desirable. There is now no proper or recognized destination for such information.

The merchant, the manufacturer, or the mechanic, comes to the capitol—he looks into your Rules of Order, and finds that you have provided for the planter, the physician, and the lawyer, but that he is nowhere recognized there. A name and a place are denied him, and he feels that although his brethren of the legislature, who are sent up here to legislate for the good of all, are entirely disposed to mete out justice to him, yet he finds you unadvised of his requirements, and actually prejudiced unwisely and unjustly against him, in consequence of being unaware of his true position in the productive community. The lack of legislative encouragement and protection to industrial pursuits in this state, and the astonishing energy of at least one class of our artizans, which overcomes even the coldness and apathy of the legislative power, cannot be better illustrated than by some allusions to the lumber trade of South Carolina, in so far as it may be indicated by that comparatively small portion of it which finds vent at the Port of Charleston, and which present, to the eye of every one who desires the prosperity of the state, features as gratifying as they are astonishing, showing that in scarcely a single item of trade, in any part of this country, is an increase exhibited so remarkable as this. The following tabular statements exhibit the exports of lumber, foreign and coastwise, from the port of Charleston, for the last four years:

EXPORTS FROM CHARLESTON OF LUMBER AND TIMBER.

	1845.	1846.	1847.	1848.
Exported to	Feet.	Feet.	Feet.	Feet.
Great Britain,	11,051	527,658	42,526	478,675
France,	14,000	75,991	50,051	85,750
North of Europe,	3,185	5,000	41,980	235,217
South of Europe,	150,319	109,563	1,142,259	1,186,217
West Indies, &c.,	1,017,613	710,883	1,448,198	1,776,451
Total to foreign ports,	1,196,168	1,429,094	2,725,014	3,762,310
Coastwise,	8,727,301	12,231,963	9,208,120	15,931,436
Grand total,	9,923,469	13,661,057	11,933,134	19,693,746

It is well known that about ten years ago the foreign export lumber trade of Charleston was in its infancy. The home market had become glutted, and the merchant sought a new outlet. Across the Atlantic he found purchasers who were eager for our pine lumber and timber, and this has led to the remarkable results which are now exhibited. The temporary falling off which has occurred at some of the foreign ports, has resulted from various causes, but principally in consequence of the absence of that system of inspection of lumber which this legislature will be sought at no distant day to establish, and which although indispensable to the continued rapid increase of our foreign trade in that article, may be crushed in its inception, unless sustained by the enlightenment which would be brought to bear upon it by a Committee especially charged with such investigations. In the pine trees of South Carolina lies, hidden and unexplored, a mine of wealth as valuable as it is inexhaustible. The tar, pitch, turpentine, lumber and timber which they afford, and the demand for which in the European market, is of incalculable extent, render them the most valuable trees of our forest, and the day is not far distant, when, in consequence of a correct appreciation of their value, the pine forests which abound in every part of our state will be carefully conserved—they will be fenced and hedged around with safeguards from injury, and instead of beholding in our cotton fields thousands of belted trees, the mocking monuments of a reckless and disastrous policy, we shall jealously provide for their use and improvement. The experiments which have already been made in the production of such naval stores as the pine produces, have been attended with the most gratifying success. At one of the depots on the South Carolina Railroad, may now be seen more than five hundred barrels of turpentine, ready for shipment, which are but a portion of the produce of a single individual engaged in this new and profitable business. The results of these experiments clearly prove, that an average net profit of more than $250 to the hand, is easily accomplished in the present state of the market, and this whilst the cotton planter is scarcely able to realize a net gain of more than $50 to the hand. The proofs are at hand, that in North Carolina the production of a single laborer of great activity and industry—in a season unusually favorable for the yield of the pine—and with prices at a liberal rate, a net profit of more than $700 has been realized. Do not facts such as these present inducements to a diversion of a portion, at least, of our labor from its customary unprofitable channels? But the inquiry will be propounded, what can legislation do for the accomplishment of all this? The answer is plain. We ask not for bounties or protections, other than such as every other interest craves. We desire only such legislation, and the means of directing it, as is granted to other pursuits. We ask only that sort of protection which legislation provides against the prejudices of the ignorant—only that sort of fostering care which will tend, by the diffusion of information respecting our true interests, to direct our energies into the most profitable employments. It may, also, be apprehended by some, that we desire to interfere, in matters of commerce, with those regulations of trade which properly belong to the federal government. Nothing is further from our wishes than this. We are content to leave the foreign and domestic commerce, and its regulations, precisely where the Constitution has placed it, but we do seek to regulate, and in so far as falls within the scope of state legislation, to facilitate and develop, that purely internal trade, which, in extent and importance, is infinitely beyond the former. The internal trade and commerce of South Carolina, with which the general government has nothing to do, and which has already been recognized and provided for, in some measure, by our own statutes, is infinitely greater in extent than all our foreign commerce. The interesting statistics which would correctly indicate this, may not properly be embraced within the limits of such a document as this, but sufficient illustration is found, for our present purpose, in a brief allusion to the trade, internal and foreign, of the United States. The exports of the United States, for fifty years past, show an average of less than $7 to each inhabitant, and the imports, of course, are about the same—arising from that well established maxim in political economy, which declares that the imports of any country must correspond with the exports, except in so far as the former may be augmented by the price of freight to the foreign market, and the mercantile profit which accrues thereon. Now, let it be considered that all that we import from abroad, including luxuries, works of art, books, &c., do not average so much as $7 to each inhabitant; and then take into view the average personal expenditure of each individual at home, for food, clothing, implements of trade, house furniture, horses, carriages, &c., all of which enter into the channels of trade before they reach the consumer, and some idea may be formed of the extent of that vast internal trade, the regulating and fostering of which falls legitimately within the province of state legislation.

The unavoidable haste, and consequent imperfection, of such a report as this, precludes the display of such facts and considerations as would, if properly exhibited, prove the necessity of providing, in this way, some such organization as would lead to a correct understanding of these important matters, and the insufficiency of the data here presented only serves to show conclusively, that we have been heretofore neglectful of those means of information which are calculated to elicit correct apprehensions of our advantages and our duties.

We know not how strong we are at some points, nor how weak we are at others. The appointment of such a committee will soon lead to the establishment of an efficient

"BUREAU OF STATISTICS,"

which will be the means of collecting and disseminating statistical information touching *all* the interests of the state of the most valuable kind. It will surely hardly be necessary to vindicate before the legislature of South Carolina, the dignity and importance of those classes of citizens whose interests form the subject matter of the memorial. By common consent, the merchant, the manufacturer, and the mechanic, stand first and highest on the platform of civilization. The agricultural interest, with us at least, stands, it is true, at the base of our social fabric; but after all, agriculture is, in the scale of civilization, but one remove from the hunter state of the savage, whilst commerce, manufactures, and the mechanical arts, are the offspring of a high state of civilization, and it is in consequence of these that knowledge is diffused, and the devotees of the learned professions are called into requisition, and made the especial repositories of those treasures of information which were previously elicited by the demands arising from those occupations.

5. THE COTTON CROP OF 1848, ETC.

MOBILE, January 9, 1849.

Bright skies are now decidedly before us. The diminished consumption, for the past two years, of cotton, has left all markets bare of manufactures, and the restoration of confidence in France, will give the impulse to trade I predicted, which has not been exceeded before. This instinctive opinion, with the modified estimates of our crop, which the minds of all are becoming prepared for, will have a tendency to advance and sustain prices for the present season, and I might venture now the opinion, that prices another year will be better than they may reach this. The era of low prices is now, in my opinion, positively passed. The enormously increasing consumption in our own, and also in every other, country, with the impossibility of a corresponding increase of production, will do for the cotton planter, what his own prudence has scarcely warranted his expecting. But while I allow that prices may go handsomely up another year, I must again repeat, that there is no probability of its advancing to a figure that will make the return equal to the investments of the same amount of capital in the various manufacturing, coal and iron mining, or railroad and bank, stocks, which exist, or might be most advantageously created. In the South, and particularly Alabama, we have very many advantageous modes of investing.

To the end that concert of action might be obtained, and the concentration of intelligent thought upon the many and important interests of the cotton planter, I should consider a convention, or congress, of cotton planters, *annually* convened, to propose and consider their general wellfare, as of vast and practical importance. It need not convene, as it did in Macon, in 1839, to keep prices up to what were at that time prevailing, 14@17c., but it would result in preventing the price from (under any circumstances) going so low as they have been in the past spring or fall. And low as cotton may be, there is, at even *one per cent.* annual profit on the capital invested, a large aggregate of capital accumulated in each year; and for the benefit of the common stock, that profit should be, and some besides, diverted toward other industrial interests. From our national and state legislatures we can expect nothing; and the total indifference of our government to the subject may be observed in the report of the Commissioner of Patents, when to this stupendous interest he devotes some tenth to a twentieth part of the notice he takes of objects comparatively valueless to this, and as usual represents Georgia as the largest cotton growing state—when *Mobile* alone exports more cotton than all the Atlantic states together, Georgia included. To which might be added, to represent the Alabama crop (according to the census of 1840), some 120,000 bales going from North Alabama down the Tennessee, and 50,000 bales going down the Chatahoochee. From this deduct some 60,000 bales, from the several eastern counties of Mississippi, and you have the Alabama crop. Our bales weigh an average of 490 lbs., those of the Atlantic states 360 to 380.

Then organize a convention to meet annually, through which you will give and receive information by published reports, &c., that must be valuable. Its duties will suggest themselves to the mind of any one who will consider the subject, and I merely desire to raise my voice in support of the proposition.

Our cotton crop, I think, will not vary far from 2,350,000 bales. The fine prospects of July were destroyed in some measure, and I think the figures below will not be far from the mark.

Atlantic states,	575,000
Florida,	175,000
Mobile,	485,000 ... to ... 500,000
New Orleans,	1,000,000 ... to. 1,050,000
Texas,	50,000
	2,350,000

The receipts are largely over those to the same period last year, but last year they held back dissatisfied with prices so much below those of September (10@ 12½c.). This year, in September, the fear of a 3,000,000 bag crop, and the improved prices then over those of April and May last, induced heavy and anxious shipments. Already the receipts are largely falling off.

I may submit a remark here, with regard to slave property, which may be of interest to some. It is known that in Virginia, in 1832, a proposition in one of the branches of her legislature to emancipate slaves in that state, in the usual way, lacked but one vote of being carried. It was a sudden proposition sprung upon the members without consultation with the people. The naked circumstance has induced the impression that slavery was held in that state, Maryland, and Kentucky, by rather a slight tenure. Upon careful inquiry on the subject, I understand that so far from this being the fact, *not one of the members*, who voted for that measure have ever been able to be elected to any office by a vote of the people, so uncompromisingly has it been condemned. And as an evidence of the appreciation of this property there, by their extended public works, factories, &c., a likely fellow is worth now in Richmond $600, and instead of 3,000 being shipped from Baltimore south this year, as was done some years ago, probably 350@400 will cover the number. Light and information is being procured with regard to the condition of slaves, and contrasting their present with their original condition in Africa, or with free negroes any where, or with the corresponding class of laborers in France, England, Ireland, or any other country—their tasks are lighter, their food better, and their situation happier in every particular. And writers have not hesitated in England, of late, to advocate the institution; and the possibility, I suppose, exists of their restoring it in their destroyed colonies in the West Indies. Coincident with the fate of the Virginia politicians, it is a remarkable fact, that Lamartine and other distinguished *citizens* of France, who fashioned and carried the Republic through its embryo, and who seemed entitled to her highest honors, but who sanctioned the *emancipation of slavery* in their colonies, have been politically proscribed, and their names are scarcely mentioned. I submit this to show that the value of this property is not deteriorating.

By the improvement in cotton, your lands will be benefited, and I may add that the extraordinary increase of the precious metals, promised from the California mines, will enhance inevitably the value of your property, and tend to the swelling of the price of cotton and other articles of produce.

I am, very respectfully, your obedient servant,

GEO. G. HENRY.

6. COASTS AND KEYS OF FLORIDA.

S. R. Mallory, Collector at Key West, thus writes to Professor Bache of the Coast Survey:

"I deem it unnecessary to state the character and extent of the immense and increasing commerce, which passes through the narrow strait between the Florida and the Cuba and Bahama shores, as the published statistics of the Treasury Department upon the subject are familiar to you. In the navigation of this passage, and particularly during the summer months, when the trade winds are light and variable, and the rapidity of the gulf stream is believed to be accelerated, vessels bound from the eastward to Cuba and the south-western Atlantic ports, are compelled to hug the Florida shore, not only to avoid the stream, but to find an anchorage in calm weather, which frequently continues several days, and both on their outward and homeward voyages, they keep the Florida shore aboard, regarding the iron bound coasts of Cuba and the Bahamas as most perilous. The Florida reefs, extending from Cape Florida to the Tortugas, a distance of about two hundred miles, subject to violent storms and the action of wayward currents, have always proved disastrous to navigators in that region. The number of vessels publicly known to strike upon them, including as well those extricated with as without the aid of wreckers, is not less than forty-eight per annum, or one in every seven days nearly; but it is confidently believed, from reliable sources of information possessed by the people of the coast, that many others strike upon the reefs and get off, of which no accounts are published. Twenty-two vessels, averaging about fifty tons each, are stationed at various points along the reefs, and pursue exclusively the business of relieving stranded property. Many of them are owned by the states of Connecticut and New York; they are expensively and substantially built and furnished, manned by strong crews of from ten to fifteen men, and commanded by skillful pilots, who have devoted their lives to the perilous profession of wrecking. These men are rarely heard of, and seem to be known only to those who have received assistance, or life itself, at their hands; and yet it is thought that few vocations are more essential to the commercial interests of our country, and that the Florida wreckers, in character and conduct, may compare favorably with any other class of seamen in the world. They are licensed by the judge of the United States district court for the southern district of Florida, under the act of Congress of the 3d of February, 1847. Their claims for salvage upon the property saved by them, are adjudicated in this court, and they are held to a strict accountability, not only for the property taken into their possession, but for their personal deportment toward the recipients of their services. The value of the property stranded on the reefs and carried into Key West, during the present year, cannot fall short of one million of dollars. During some years it far exceeds this amount, and the value of all the property which strikes upon them may be safely estimated at two millions of dollars per annum. During the year 1846, there were fifty-five vessels stranded and carried to Key West in distress, the aggregate value of which, with their cargoes, was $1,624,800. The amount of salvage decreed to the wreckers was $108,992, and the total amount of expenditures at Key West by these vessels and cargoes, was $213,423. Of these fifty-five vessels, eleven were owned in New York, twelve in Maine, seven in Massachusetts, two in Connecticut, two in Rhode Island, five in Pennsylvania, one in South Carolina, five in Florida, and ten in foreign countries.

7. THE COTTON TRADE.

The Boston Journal gives the subjoined statistics in relation to the Cotton trade. The table shows the amount imported into England during the following periods:

Years.	Pounds per year.
1771 to 1795	1,170,181
1771 to 1780	6,122,717
1771 to 1790	19,105,547
1791 to 1800	31,341.373
1801 to 1810	69,372,179
1811 to 1820	105,571,546
1821 to 1825	105,687.033
1826 to 1845	351,700.000
1846	588.000,000
1847	439,000,000

In twenty years, from 1826 to 1845, of every 10,000 bales worked up:

England used	5,700 bales.
France	1,700 "
Holland and the North of Europe	850 "
Trieste and the South of Europe	450 "
United States	1,300 "

No particular account was kept of the amount used in England from 1705 to 1770. In 1832, the amount used in that country was 277,000,000 lbs., and the United States now use equal to that amount. During the twenty years specified above, it will be seen that the amount used in France, exceeded that used in this country. The United States now use more than France.

The prices of upland cotton in 1808, in England, was 72 cents per lb.; in Amsterdam, $1,44 per lb., and in Havre, $1,92 per lb.

In the years 1845–6, England used 1,630,000 lbs., at a cost of $167,000,000, and gained in manufacturing, $412,000,000. Of which, exported to foreign countries, $359,000,000; used at home, $220,000,000 value. Whole value manufactured in three years, $599,000,000.

The amount of cotton exported from the United States in the year 1836, was valued at $71,284,925, and would have taken more than one hundred tons of gold, at £3 17s. 9d. per oz. to pay for it.

8. SUPPLY OF COTTON 1848-9.

The following from the London Economist is deserving the consideration of our planters:

MANCHESTER, *April* 12, 1849.

Sir—As I have made free use of the cotton statistics contained in your last number, I think it but civil to you to send you the result of the calculation.

My inquiry has been to find how far we are likely to be overwhelmed with 2,600,000 bales from America, supposing all other countries to send us the same quantity as last year. The Brazilian and other imports I have taken from Hollinshead, Tetley & Co.'s circular, dated Dec. 29, 1848, and have added 30,000 bales to it for imports into London and Glasgow from those countries. The whole growth of American being taken, requires no addition.

The summary of the whole is, that the whole growth of cotton, at the present rate, will go into consumption, and that the stock at the end of 1849 will be more likely to be reduced than increased.

According to the tables in the Economist of April 7, 1849, it appears that—

	1848–'49 bales.		1847–'48. bales.
The number of bales of cotton taken for consumption in the U. S. of America, from Sept. 1, 1848 (date of the New York cotton statement), to March 13, 1849, is	323,626	against	269,595
America has therefore consumed 323,626 bales in 194 days. If 194 days, 323,626 bales; 7 days, 11,677 bales weekly.			
Exported from the U. S. of America to all other countries, omitting Great Britian, between September 1, 1848, and March 13, 1849—194 days.	307,757	against	358,658
If 194 days, 307,757 bales; 7 days, 11,105 bales weekly.			
Cotton exported from Great Britain to other countries, between Jan. 1, 1849, and March 31, 1849—90 days.	51,200	against	19,500
If 90 days, 51,200 bales; 7 days, 2,982 bales weekly export.			
Consumption of cotton in Great Britain between Jan. 1, 1849 and March 31, 1849—90 days...............	411,814	against	326,429
If 90 days 411,814 bales; 7 days, 32,030 bales weekly consumption.			

	Bales.
Weekly consumption of cotton in the U. S. of America............	11,677
Weekly exports from America to other countries, omitting Great Britain.	11,105
Weekly exports from Great Britain to other countries.............	3,982
Weekly consumption of Great Britain...........................	32,030
Weekly consumption.......................................	58,794
If 1 week, 58,794 bales; 52 weeks.............................	3,057,288
Estimated growth of the U. S. of America......................	2,600,000
Import of Brazilian cotton into Liverpool in 1848.................	100,200
Import of Peruvian do. do. do.	1,896
Import of West India, Carthagena, &c. do.	4,161
Import of Egyptian do. do. do.	27,820
Import of East India do. do. do.	136,012

Import into London from other places, omitting the United States—suppose	30,000
Total supply of cotton for 1849	2,900,090
On the supposition that the present rate of consumption should be maintained in England, America, and on the Continent of Europe, for the remainder of the year 1849, the requirement would be...	3,057,288
The estimated growth of cotton available for the year 1849, is	2,900,090
Deficiency in bales	157,198

I am, sir, yours, very respectfully, H. HEYCOCK.

THE PUBLISHING BUSINESS.

I. PERIODICAL PUBLICATIONS.

1. *Southern Quarterly Review*,	Charleston,	Vol.	XV,	$5.00	per annum,
2. *North American Review*,	Boston,	"	LXVIII,	5.00	"
3. *Hunt's Merchants' Magazine*,	New York,	"	XX,	5.00	"
4. *Southern Literary Messenger*,	Richmond,	"	XV,	5.00	"
5. *Western Journal*,	St. Louis,	"	II,	3.00	"
6. "*Plough, Loom and Anvil*,"	Philadelphia,	"	II,	3.00	"
7. *Banker's Magazine*,	Baltimore,	"	III.	3.00	"
8. *New Orleans Medical Journal*,		"	V,	5.00	"
9. *Charleston* " "		"	IV,	4.00	"
10. *Silliman's Journal*,	New Haven,	"		5.00	"
11. *Western Journal of Boatmen*,	Cincinnati,	"	I,	2.00	"
12. *Rail Road Journal*,	New York,	"	XXII,	5.00	"
13. *Mining Journal*,	Boston,	"	II,	3.00	"
14. *Ethnological Journal*,	London,				
15. *Literary World*,	New York,			3.00	"
16. *Simmond's Colonial Magazine*,	London,			6.00	"
17. *Republication Foreign Reviews*,	New York,				
18. *Monthly Law Reporter*,	Boston,	"	I,	3.00	"
19. *Franklin Institute Journal*,		"	XLVII,	5.00	"

These leading periodicals are all on our exchange list, and are regularly received. The *Southern Quarterly* is now under the editorial charge of that accomplished gentleman and scholar, William Gilmore Simms of South Carolina, and already exhibits the evidences of his ability. For the honor of the South we wish the work perpetual. The *North American* needs no eulogium from our hands, occupying the prominent position and fame that it does. Mr. *Hunt's Magazine* continues to win golden opinions in Europe as well as in our own country; and among its ablest papers are those from the pen of Thomas P. Kettell, Esq., of New York. We always read the *Literary Messenger* with the liveliest interest. In its character it is almost alone in our country. Mr. Thompson has done great credit to the literature of the South. In the last number, Lieut. Maury contributes an excellent paper upon the projected routes to the Pacific ocean. The *Western Journal* at St. Louis continually improves in appearance, size and matter; and from its location has the widest field. Skinner of the *Plough, Loom and Anvil*, is a veteran in agricultural matters and has done as much good in their behalf as any other man in the Union. Though we like not the theory of his work, there are hundreds and thousands who do, and should sustain it liberally: *audi alteram partem* in any case. We have often commended the *Banker's Magazine* as deserving the support of the bankers and liberal minded merchants throughout the Union. Dr. Hester has lately become sole editor of the *New Orleans Medical Journal*, and is continually adding to its interest. We congratulate our neighbor on his success. Dr. Fenner is one of his most constant and valuable contributors, and was one of the founders of the Journal. The *Charleston Medical Journal* seems to lose nothing in ability or interest. Every person interested in the progress of science will of course read *Silliman's Journal*. The old series of fifty volumes should fill a niche in every respectable library. The *Boatman's Magazine* is a new enterprise by Mr. Embree, and the object is to disseminate knowledge about our Western boats, boatmen, and navigation. The *Rail Road Journal*, formerly conducted by Mr. Minor, has passed into the hands of H. V. Poor, who spares no labor in elevating its character. The important interest of mines and miners is well represented in the *Mining Journal*. The *Ethnological Journal*, conducted by Luke Burke, Esq., is one of the profoundest publications in any country, relating to the physical history of Man and the Races. We have intended, for some time, paying our repects to the Messrs. Duyckinck, who have succeeded Mr. Hoffman in the *Literary World.* They have made it one of the most interesting publications in the world to men of letters, and deserve the most abundant success. In it we get a faithful record of all the late publications in every country. Somehow or,other, of late, our exchange with *Simmond's Colonial Magazine* has been stopped. We desire greatly to renew it, from the value we set upon that admirable statistical journal of the British colonies. We may say the same of Messrs. Leonard, Scott & Co.'s New York *republication* of Blackwood, Edinburgh, London Quarterly and Foreign *Reviews*. They have not been received by us for some time. The subscription price for the four works is but $10 per annum, about one-third of the English price.

It is our intention regularly to notice our exchanges, as a matter which must be of interest to every reader of the Review.

2. LATE ADDRESSES.

1.	*Address before Mechanics' Institute,* New York.	Hon. Z. Pratt, 1849.
2.	" " *Franklin Library Society,* "	" " "
3.	" *at the Dedication of the Athenæum,* Baltimore, on " *Commerce, Literature and Art.*"	Brantz Mayer, Esq.
4.	" *before Young Men's Library Association,* Cincinnati, O.— " *Cincinnati and her Destiny.*"	Governor Bebb.
5.	" " *New England Society of Louisiana.*	Hon. S. Thacher.
6.	" " *State Agricultural Society,* South Carolina.	Hon. R. F. W. Allston.
7.	" *on the opening University of Mississippi.*	Hon. Jacob Thompson.
8.	" *Inaugural, as President Univer. of Mississippi,*	Geo. Fredk. Holmes.
9.	" *before Cincinnati Mercantile Society.*	Elwood Fisher.

All who know Mr. Pratt. are acquainted with the strong practical character of his mind, and the interest he takes in everything tending to advance the condition of the working classes. He is one of the most prominent and useful men in the State of New York. It is our intention to make some extracts from Mr. Mayer's eloquent production. Governor Bebb is enthusiastic about the destinies of Cincinnati. We shall exhibit hereafter many of his views. Our acquaintance with Judge Thacher dates from his visit here last season, to deliver his address. The prevalence of a fearful epidemic, at the time, was unfortunate. The address is a vindication of New England. Mr. Allston is one of the most liberal agriculturists of Carolina, and is the author of one of the ablest memoirs upon rice, yet given to the world. Our friend Geo. Fred. Holmes, whom we have known for many years as an erudite scholar, will preside well over the Mississippi University. His inaugural is an admirable paper, and has been extolled in the highest terms, by the Southern Literary Messenger, which we indorse. Mr. Fisher's address is a triumphant *vindication of the South* from the aspersions of the abolitionists and others, and shows that this portion of the Union is, if anything, the most prosperous. The arguments are powerful, and are well sustained. Hundreds of thousands copies of the address have been printed, and we shall soon present it to our readers.

3. REPORTS, ETC., TO CONGRESS.

1. *Vattemare's International Exchanges.*
2. *Secretary of Treasury,* 1848.
3. *Coast Survey in regard to Florida,* 1848.
4. *Professor Bache on Coast Survey,* 1848.
5. " " *Weights and Measures,* 1848.
6. *Col. Abert on Commerce Western Lakes.*
7. *T. Butler King on Pacific Steamers.*
8. *J. D. Westcott on Everglades of Florida.*
9. *Aaron H. Palmer,* "*Memoir regarding East India Commerce.*"
10 *Geological Survey of Missouri.*
11. *Fremont and Emory's Explorations.*
12. *Report Commissioner of Patents on Steam Explosions and Patent Laws.*

On several occasions we have called attention to Mr. Vattemare's system of Exchanges between governments, of products in literature, arts, science, &c. It has obtained favor in most of the States. We intend an effort to get our next Legislature to unite in the movement. Mr. Walker's closing report, as *Secretary of the Treasury*, is one of the most interesting public documents for a long time We were pleased to see the triumphant vindication of Prof. Bache, in the last Congress, from the attacks of Mr. Benton and others. The speech of Jefferson Davis of Mississippi, in this respect, was powerful and irresistible. Prof. Bache's works are an honor to the science of our country. We wish we had time to analyze the reports now. The one on *weights and measures* will serve us much in the preparation of an article on that interesting subject From the report of Col. Abert on *Western Lakes*, we shall hereafter extract largely, as we have referred in the present number of the Review to the distinguished labors of Mr. King, regarding our *Pacific commerce*, etc. Mr. Westcott, on the *Everglades* of Florida, is at home. His labors make almost a volume, from which we shall be able to prepare a paper of great interest to our readers. But of this hereafter. We would also acknowledge Mr. Yulee's labors in respect to a *rail road across the Florida peninsula*, but have not the necessary information now. Mr. Palmer proposes the establishment of an Eastern or *Oriental agency*, and gives a great variety of interesting matter in regard to eastern countries. He proposes a volume upon these subjects. The Historical Society of Missouri petition for a *geological survey* of that State. These surveys should be everywhere more common. Some years ago, we had a partial one in Louisiana, but the manuscript report was not printed, and is *lost*. Thus are our affairs often managed, though the people PAY. It is unnecessary to refer again to the North Western Explorations, having sufficiently noticed them in our introductory article. Mr. Burke's report on *steam explosions* will afford matter hereafter.

We acknowledge our indebtedness to the various gentlemen above for their reports, and also for similar courtesies from Hon. H. Johnson, S. Dowas, E. La Sere, Lieut. Maury, etc., etc.

4. LATE BOOKS, ESSAYS, &C.

1. *Western America*, by Charles Wilkes, U. S. N.	75 c.
2. *Notes of Travel in California.*	25
3. *Chambers' Miscellany*, Monthly.	
4. *Mobile and Ohio Rail Road*, F. B. Clarke, Mobile.	
5. *Reports and Catalogue Young Men's Library*, Cincinnati.	
6. *Cultivation of the Tea-Plant*, by Junius Smith, LL. D.	
7. *Vital Dynamics*, by Dr. Dowler, New Orleans.	
8. *Girardin on Dramatic Literature:* translated by R. G. Barnwell, New Orleans.	
9. *Arrest of Aaron Burr*, by A. J. Pickett of Alabama.	

J. B. Steel. Camp street, has the two first works for sale, and receives all the various publications of the Messrs. Appleton of New York. We commend those on Calfornia to all desirous of emigration. Mr. Morgan is agent for *Chambers' Miscellany:* Gould, Kendall & Lincoln, Boston, publishers. The work is well known. We shall give publication, whenever it is possible, to the able report of Mr. Clarke on the *Mobile and Ohio Rail Road*, illustrated by his map, if we can get it. He will please inform us. The Young Men's *Mercantile Society* at *Cincinnati*, is one of the most prosperous of its kind in the Union. We thank the Society for the following resolution they have sent us:

"MERCANTILE LIBRARY SOCIETY, CINCINNATI, January, 1849.

"*Resolved*, As the sense of the Mercantile Library Association of Cincinnati, that *De Bow's Commercial Review* of the South and West supplies an important desideratum in the mercantile literature of this great western valley; that the comprehensive views and practical attainments of Professor De Bow are special qualifications for conducting such a periodical; and that this Association very cordially recommend the *Commercial Review* to general favor and the special patronage of our mercantile community."

Mr. Smith's pamphlet on the *Tea-Plant* is a curious and instructive paper. He maintains that the United States must become yet a great tea raising country, and selects the upper parts of South Carolina as the most favorable sites. We intend, hereafter, an abstract of his paper. The translation of Girardin's *Dramatic Literature*, by our amiable, accomplished and intelligent friend, R. G. Barnwell, Esq., of this city, and formerly of South Carolina, has only reached us in the proof-sheets. We watched the progress of our friend's labors with great interest, and now congratulate him upon their consummation. As soon as the work is regularly published, we will give it an elaborate notice. We shall extract largely from Dr. Dowler's pamphlet in this or the next number. Col. Pickett's pamphlet regarding Burr's arrest, is an extract or chapter from his forthcoming work upon the *History of Alabama*. It is well written, and gives much new and interesting information upon the subject of the arrest, which, it appears, took place in Alabama. We anxiously await the history itself.

5. EDITOR'S NOTE.

1. With the experience of three years and after a temporary suspension, we have recommenced the *Commercial Review* upon a far better basis than ever, with an increased subscription list, with good publishers and the removal of prominent difficulties. If our friends and the South and West generally, stand by us, *our success is established, and the perpetuity of the work secured*—a matter of the utmost importance to the whole of these regions.

We never knew the number of our friends until the hour of need. In answer to our circular, Dr. Winfree of New River, sends the amount of $60 in *new subscriptions;* Mr. Miles McGehee says, "I will *bind myself for ten new subscribers*, and will pay you $50 annually; and if I can get the number, will furnish you with the names, and shall also exert myself further." Judge Hopkins of Mobile: "I inclose herein *twelve new subscribers*." R. F. W. Allston of South Carolina: "I inclose you *eight new subscribers*. I trust I may be able to remit to you soon, five or six years *in advance* of my individual subscription." Ex-Governor Hammond of South Carolina: "It is a disgrace to the South if your Review should fail. It is not that our people do not pay enough to support all truly southern papers and periodicals. Unfortunately, they are seduced by agents of all sorts of trashy publications, &c., &c." Robertson Topp, Esq., Memphis: "I am with you for the South, and will assist you in getting subscribers." In addition to these, there are a great many others whom we will notice hereafter as they deserve. Among others, Col. W. S. Hamilton, Bishop Polk, etc. We will publish a faithful list.

Professor De La Torre of the Royal Society, and a leading gentleman of CUBA, writes as follows: "I send you some questions of the *Royal Economical Society of Cuba*, which have been confided to me by the planters of the island. To whom could I more appropriately apply for answer, than to the able editor of the most complete Review in America? I hope you will answer the queries in successive numbers—also giving us a paper upon *Slavery and the Slave Laws* in yours and the other Slave States, and publishing whatever you can upon *coffee, rice, maize, cotton, wheat, wax, timber* or *lumber*. You may calculate upon the *subscription of more than one hundred persons in Havana*, who have expressed to me a desire that a place may be designated where they may subscribe, etc., etc."

We intend digesting the letters that are received. We have one from Mr. Ballustier, American Consul at Singapore in the *East Indies*, who says the articles on sugar, published by us, "have produced a revolution in its culture *there*."

One of the difficulties which the Review has met with is, that subscribers *do not all pay promptly*. Is this fair? Will they wait for the call of a collector, which costs us large commissions, when the opportunities of remitting by *mail* are so frequent?

We wish that those of our subscribers who can afford it, would take two or more copies for themselves, or pay several years subscription in advance. In addition to our labor, we have already lost a large sum by the Review. It is our hope hereafter, to make it up from the excellent publishing arrangements we have been fortunate enough to make, and the strong friends of the Review.

6. TO CONTRIBUTORS.

The able article on the *Valley and Waters of the Mississippi*, by Mr. Stein of Mobile, has been received, and will appear in our next number. Col. Hamilton's article will also appear, and Mr. Cooke's of St. Louis, and Hamilton Smith's, Esq., of Louisville, on the *Cotton Manufacture*, etc. We regret that these could not appear in the present number. We shall publish Hammond's unanswerable "*Letters on Slavery*," and Ellwood Fisher's "*North and South*," and an elaborate paper on "*Slavery*," now on our desk. We have a great variety of additional matter, and have engaged many new and able contributors for the Review. John M. Cardoza of Charleston, will soon be a *regular correspondent*.

7. TO THE PLANTERS.—SUGAR AND COTTON.

The importance of an AGENCY in New Orleans in connection with the Review, to aid the planters in the *purchase and sale of estates*, has frequently suggested itself. We have determined to start it. As the Review circulates largely in all the Southern and Western States, and is now getting a Northern circulation, planters will have an opportunity of offering their estates to the best advantage. They will be charged for the advertisement of estates, according to the space occupied and time advertised, *on reasonable terms*, in the pages of the Review, as will be agreed upon. When sales are effected through the AGENCY, the usual commission will be charged. *Editorial notices* will be called to the estates. Messrs. H. Weld & Co., publishers of the Review, able and energetic business men, will take *exclusive* charge of this department. In the present number we call attention to a large plantation in Attakapas, Louisiana, among our advertisements.

☞ All letters relating to the business of the Review will be directed to Weld & Co., New Orleans; all relating to editorial, to J. D. B. De Bow, care of Weld & Co., Publishers Commercial Review, New Orleans.

UNIVERSITY OF LOUISIANA,—NEW-ORLEANS.

MEDICAL DEPARTMENT.

Professors.—Drs. T. HUNT, JAMES JONES, WARREN STONE, J. L. RIDDELL, A. H. CENAS, G. A. NOTT, A. J. WEDDERBURN, Y. R. LE MONNIER.

The Lectures in this College, lately concluded by the graduation of a large class, will commence on the 20th of November, in the capacious edifice on Common street. Having adopted and maintained a high standard of medical education, the Professors, from their connection with the City Hospital, enjoy superior advantages for practical instruction in clinical Medicine, Surgery, and Midwifery. There is a fine amphitheater in the Charity Hospital, for surgical operations and lectures. Opportunities for the pursuit of practical anatomy are unequalled—subjects being supplied gratuitously in any number. For further information, persons will please address the Dean for the printed circulars and catalogue. For the correction of false statements it is proper to mention, that the expenses of boarding, &c., in this city are much reduced, that the epidemic yellow fever never prevails after the first week in November, and that, hereafter, contagious diseases will not be promiscuously admitted into the medical wards of the Hospital.

JAMES JONES, M. D., Dean.

LAW DEPARTMENT.

The Lectures and instruction in this department will commence on the second Monday of November next, and continue until the 1st of May.

Those by Professor BULLARD will embrace History of Roman Law, Analysis of the general principles of Roman Law, on the approved method of the German School; Jurisprudence of Louisiana, compared with Roman Law, and French and Spanish codes; outline of Land Titles in Louisiana, derived from Spain, France, and the United States.

Those by Professor McCALEB will embrace Admiralty and Maritime Law, International Law, including Law of Prize, Rights of Peace and War, Treaties, etc.; Jurisdiction United States Courts, Supreme, Circuit, District, Instance, and Prize Courts, &c.

Those by Professor HUNT will embrace Commercial Law, as it relates to mercantile persons, property, contracts, remedies, partnerships, corporations, bills of exchange, freight, average, insurance sale, guarantees, lien, &c., &c.; Criminal Law and Practice; Law of Evidence.

Those by Professor MONROE will embrace the Common Law and Equity, Jurisprudence, and Practice and Pleadings in Civil Cases: Constitutional Law.

Chief Justice EUSTIS will deliver a series of Lectures on the Rights of Persons and the Conflict of Laws; and CHRISTIAN ROSELIUS, Esq., will assist as Adjunct-Professor, in the department of Civil Law.

Students must produce satisfactory evidence of good moral character.

The degree of Bachelor of Laws conferred on those who have attended two courses of Lectures, or one full course after having studied at least one year in the office of a Counsellor at Law, and after strict examination by all the Professors. A Diploma from the law faculty of the University is equivalent to a license to practice in the courts of Louisiana. During the course there will be frequent examinations. There will be organized also, a Moot Court, which will be holden once every week, presided over by one of the Professors.

No city in the United States has the advantages which New Orleans possesses for the ready and perfect acquirement of the Modern Languages. Good Board can be obtained, varying from twenty-five to thirty dollars per month.

The price of *Tickets for the Course* is fixed at $100, or $25 for each Professor.

H. A. BULLARD, Dean of the Faculty.

☞ Access to a good Library afforded the Students.

DEPARTMENT OF POLITICAL ECONOMY, COMMERCE, &c.

The course of instruction will be conducted by Oral Lectures and examinations. Though primarily intended for the large and important class engaged in, or preparing for, Commercial life, it is at the same time addressed to all who are pursuing a liberal education, with a view to any of the professions. No subject can be more generally interesting and important than those which relate to the industry, resources, and wealth of nations, and the laws which influence their progress or decline. The course will embrace,

I. Relations of Governments and Industry; Sources of National Wealth and Progress, etc.; Production, distribution, and consumption of wealth.

II. History and Progress of COMMERCE, its Principles and Laws; Home and Foreign Commerce; Tariffs, Treaties, Life Insurance; Roads, Canals, Shipping, and Revenue; Systems of Reciprocity, Balances of Trade; Mercantile and Navigation Systems; Colonies and Colonial Systems; Banks, Finances, Accounts, Transportation, Book-keeping. Principles of Merchant Law; Commerce of Nations, Ancient and Modern; Geography of Commerce; Commodities of Commerce; Literature of Commerce, etc., etc.

III. Progress and results of AGRICULTURAL SCIENCE; Principles of Agriculture; Comparative condition of Agricultural, Commercial, and Manufacturing communities; Statistics of Agriculture, etc.

IV. Origin and Progress of the MANUFACTURING SYSTEM; its relations to the other pursuits; Invention and Machinery in Manufactures; Condition of the Manufacturing Classes; Statistics of Manufactures, etc.

A course of Lectures will be delivered upon the PROGRESS OF THE AMERICAN REPUBLIC, and occasional *Public Lectures* upon the same subjects. The advantages of Public and Private Libraries, Reading Rooms, and Business Experience enjoyed in New Orleans, are unrivalled.

Lectures begin in November and continue throughout the winter.

Students will have the advantage of any of the other chairs of the University, by paying the usual fees. A Tutor in the Modern Languages, Book-keeping, etc., etc., will be provided for moderate additional fees. Applicants will apply early, J. D. B. DE BOW, Professor.

EAGLE GIN-STAND,

MANUFACTURED BY

BATES, HYDE & CO., BRIDGEWATER, MASS.

Agents:

Geo. H. Gray & Co., Boston.
Tufts & Hobart, New-Orleans, La.
John Philips, Mobile, Ala.
Baker & Little, Natchez, Miss.
Taylor, Hunt & Co., Vicksburgh, do.

J. Heard & Co., Yazoo City, Miss.
Harris, Memphis, Tenn.
Edward Hobar, Galveston, Texas.
James Hibbard, Napoleon, Ark.
Wm. Flagg, Bachelor's Bend, Miss.

The undersigned, manufacturers of the Eagle Gin-Stand, respectfully invite the attention of Cotton Planters, and others interested, to some of the recent improvements in their Gin Stands now offered for sale:—

The frame of the machine, which is so essential to the durability and accurate working of the parts, is constructed in a more permanent and substantial manner than formerly, having eight posts or stands, and is permanently secured and bound together with joint bolts.

The "Detached Grates," which have been in extensive use for many years, have been improved in form, and adapted to other parts of the improved machine; they are chilled or hardened where most exposed to friction, and in their present form are believed to be superior in many respects to any other form of grate.

☞ The "Improved Patent Brush," recently added to the Eagle Gin-Stand, is believed to combine all the advantages of the cylinder or close, and the winged or open brushes, avoiding the objections to which both these forms are liable; the whole supply of air for the draft of the Stand is received through openings in the Brush-heads, and forced out between the rows of bristles. In this way, a more full and uniform current is established; the motes, dirt and false seeds are more effectually disengaged from the fibres, and the ginned cotton, when delivered into the lint room, has that peculiar "combed" or "carded" appearance so well known to dealers in that staple.

There are many minor improvements, not necessary to be mentioned in this circular, which will be found to add to the merits of this machine.

Ample evidence of the satisfactory operations of these Gins, may be obtained from their agents.

☞ Orders addressed to us directly, or to either of our agents, will receive immediate attention.

Bridgewater, Mass. BATES, HYDE & CO.

CARVER'S IMPROVED COTTON GINS.

G. BURKE & CO.,

COTTON FACTORS AND GENERAL COMMISSION MERCHANTS,
CHIEF AGENTS FOR THE SALE OF
E. CARVER & CO'S.

IMPROVED COTTON GINS.

THEY HAVE ON HAND A LARGE ASSORTMENT OF THE USUAL SIZES,

No. 70 Magazine Street,
OPPOSITE THE CANAL BANK, *NEW-ORLEANS.*

Agents:

Cobb & Manlove, Vicksburg, Miss.
F. B. Ernest, Natchez, do.
Boughton & Murdock, Rodney, do.
N. McCundall, Bayou Sara, La.

Titus & Co., Memphis, Tenn.
Horton & Clark, Mobile, Ala.
Gilmer & Co., Montgomery, do.

Note.—The Cuts that should accompany these advertisements have been misplaced.

Phœnix Foundry, Gretna.

The subscriber has made such arrangements as will enable him to execute orders for any description of FOUNDRY WORK, on as good terms as can be given by any concern in the country. He solicits the patronage of Sugar Planters and others, pledging himself, that for workmanship and dispatch, his establishment shall be surpassed by none. ☞ Orders left with his agent, Artemon Hill, *No. 34 Gravier St., New Orleans,* will have immediate attention.

SILVESTER BENNETT.

ISRANG & WAGNER,

Southern Clothing Manufactory.

D. ISRANG,

MILITARY AND CIVIC TAILOR.

C. F. WAGNER,

PLANTATION GOODS, CLOTHING,
Military Goods and Gentlemen's Furnishing Store.

☞ *All orders filled on the shortest notice.*

82 Magazine, corner of Poydras St.

GOOD AND FASHIONABLE CLOTHING.

ONE PRICE STORE.

ALFRED MUNROE & CO.,

No. 34, Magazine St.,

Have now the largest stock of Clothing and Gentlemen's Furnishing Goods in the South; and as all our goods are manufactured expressly for our own retail sale, we consequently have the fullest assortment of every description of Clothing in New-Orleans; and in requesting a call from all who read this, we do so with the fullest confidence that we are able to meet their wishes, and afford the most perfect satisfaction to all our customers. The system of business which we have established cannot but be satisfactory to the purchaser. Every article in our store is offered at the lowest price at which it can be sold, and no reduction can in any instance be made. If, after the purchase of any article, any dissatisfaction exists, it may be returned or exchanged, or the money will be refunded.

A. KIRKMAN. R. DYAS. W. T. MASSIE.

KIRKMAN, DYAS & CO.,

WHOLESALE GROCERS,

52 and 53 New Levee.

J. D. HALLAM,

Attorney and Counsellor at Law,

Opelousas, La.,

Will attend the Courts in the 14th and 15th Judicial Districts.

Reference: Hon. George R. King, } *N. O.*
Mess. Stockton & Steele, } *N. O.*
" Waters & Co., } *N. O.*
Joseph H. Moore. } *N. O.*

JOHN S. WORTH,

Large Retail Store for the sale of Gentlemen's and Ladies'

FINE BOOTS AND SHOES,

TRUNKS, VALISES, CARPET-BAGS, &c.,
Under the St. Charles Hotel, corner of
COMMON-STREET, NEW-ORLEANS.

Always on hand, at the above Store, a large assortment of the above articles (wholesale) at our Newark Factory prices.

☞ *Manufactory*, 346 *Broad-st. Newark, N.J.*

NEW CLOTHING STORE.

JOHN SOUTHWELL & CO.,

21 CANAL ST., Under Planter's Hotel,
Keeps constantly on hand Fashionable Clothing of every description.—Boys' Clothing, Plantation Suits, Gentlemen's Furnishing Goods, Trunks, Carpet Bags and Umbrellas, and every article usually kept in a well stocked Clothing Store.

W. S. MORGAN,

WATCHMAKER AND JEWELER

NO. 37 CANAL STREET,
Third door below Camp-street,

☞ Watches, Jewelry, Canes, Umbrellas and Fancy Goods. ☜

LAWRENCE & BLOOD,

Grocers & Commission Merchants,

16 NEW LEVEE.

Brinkleyville Vineyards and Nurseries.

A pretty large supply of *Scuppernong* (the *best* grape in the *world*, both for fruit and wine, in our country) grape vines, well-rooted, still on hand; and some other best varieties for American culture, at the medium price of 25 cents each, and $4 per hundred for cuttings. Also, such

FRUIT AND ORNAMENTAL TREES

As are most suitable for the southern parts of our Union. Also, Rhubarb, or Pie-plants, for Tarts; and Raspberry and Strawberry—and, in short, most articles in the Nursery line of business, *at moderate prices.*

BEST AMERICAN WINES, at from $1 to $6 per gallon, according to quality. Barrels or casks, as well as bottles of wine, and Nursery articles, or all together, when for distant places, put up in Boxes to prevent abstraction. &c.

Cash, or equivalent, before forwarded. An equivalent, a good draft on bank; say of Richmond, Va.

Boxes, as heretofore, may be sent to New-Orleans, by a line of packets from Richmond, Va., or through New-York, and insured by my agents, Peebles, White & Davis, at Petersburgh, Va. In case of box lost, another sent, or amount refunded.

Thankful for patronage and high encomiums, by letter. on his wines, vines, &c., especially from gentlemen South and West of the Union, the subscriber hopes by unremitting exertions to further advance the important Vineyard and Nursery cause in our country.

SIDNEY WELLER.

Brinkleyville, Halifax County, North Carolina, Dec. 18, 1848.

WILLIAM DINN,
SEEDSMAN AND FLORIST,
NO. 11 COMMON STREET,
Flower Garden at the end of Apollo-street,
NEW-ORLEANS.

☞ Garden, Farm and Flower Seeds; Garden Tools, Agricultural Implements; Fruit Trees of all kinds; Shrubbery, Green-house Plants; Dutch Bulbous Flower Roots. Books on Gardening, Farming, &c., for sale on reasonable prices.

UPHOLSTERY, PAPER HANGINGS,
Transparent Window Shades, &c., &c.,
WHOLESALE AND RETAIL,
No. 58 Chartres Street.

A Splendid Assortment just received.

☞ Paper Hanging done in the best manner and warranted. DUBOIS & FINN.

HOVEY'S TRUNK MANUFACTORY,
Clinton Avenue, Brooklyn, L. I.,

☞ REPOSITORY, 188 Pearl st., New-York; 9 Canal-st., New-Orleans.☜

J. H. PALMER.
Wholesale Dealer in Dry Goods.

☞ Especial attention given to *Plantation* and *Family Goods.*☜

56 GRAVIER ST., NEW-OREANS.

G. N. MORISON,
WHOLESALE DRUGGIST,
And Dealer in Paints, Oils, Glass, Dyestuffs, &c.
12 MAGAZINE-STREET.

SAMUEL JONES, JR.,
[Late Talbot, Jones & Co., Baltimore.]
GROCERY,
Commission and Forwarding
MERCHANT,
NO. 45 POYDRAS-ST., NEW-ORLEANS.

HYDE & MOSS,
Auction and Commission Merchants,
Sellers of and Dealers in all kinds of
MERCHANDISE,
No. 13 Canal street, running through to 26 Common street, New-Orleans.

Where buyers of merchandise can, at all times, find good bargains at private sale, or at auction, of Groceries, Staple Dry Goods, Ready-made Clothing, Hats, Boots, Shoes, and a great variety of other articles of general use, always at greatly reduced prices at wholesale.

COXE & CO.,
Wholesale and Retail Druggists,
Corner of MAGAZINE AND POYDRAS Sts.,
NEW ORLEANS,

Import and have constantly on hand, a large assortment of Fresh and Genuine Drugs and Medicines, which are warranted pure, and offered for sale upon reasonable terms.

FROST & CO.,
Dealers in
Hats, Boots, Shoes, Clothing and Plantation Goods.
10 MAGAZINE, between Canal and Com. sts.,
NEW-ORLEANS.

MILLSPAUGH & MAUNSELL,
Ship Chandlers & Grocers,
NO. 54 FRONT LEVEE,
Third Municipality, between Enchien and Port streets,
NEW-ORLEANS.

☞ Ship and Cabin Stores and Family Groceries put up at the lowest market prices, and delivered free of expense.

NEW CLOTHING STORE.
Under St. Charles Hotel, corner Common-st.
FASHIONABLE CLOTHING.

A complete and general assortment of superior Ready Made Clothing and Furnishing Goods always on hand. The clothing is from their own Manufactory. Purchasers are invited to call and examine their goods—where they will not only find the best and most fashionable made Garments, but decidedly cheaper than at any other Clothing House in the the city of N. Orleans. MOGRIDGE & ANTHON.

Under St. Charles Hotel, corner Com. st.

WHOLESALE CLOTHING STORE.
TAYLOR & HADDEN,
35 Magazine Street,
Corner of Gravier street (Granite Buildings, opposite Bank's Arcade),

Receive weekly from their Manufactory in N. York, fresh supplies to their stock of CLOTHING, made in the most fashionable style, which they sell at the lowest New-York prices, wholesale and retail.

NEW-ORLEANS
AGRICULTURAL WAREHOUSE;
R. L. ALLEN,
No. 75 CAMP-STREET,
Expressly for the sale of
PLANTERS' AND FARMERS' IMPLEMENTS:

Plows, Harrows, Rollers, Corn Planters, Cultivators, Drill Barrows, Reaping Machines, Scythes, Rakes, Horse-Powers, Hay, Straw and Stalk-Cutters, Corn-Shellers, Corn, Rice and Grain-Mills, Axes, Cotton Gins, Hoes, Spades Shovels, &c., &c., &c.

P. R. FELL & CO.,
Importers of and Dealers in
CROCKERY, CHINA AND GLASS-WARE.
WHOLESALE AND RETAIL,
No. 84 Common Street, New-Orleans.

☞ Plated German Silver and Britannia Castors, Tea-setts, Forks and Spoons, Table Cutlery, Tea-trays, Lamps, &c., &c.

NEW ORLEANS WHOLESALE AND RETAIL

LITERARY DEPOT.

AGENCY FOR

Reviews, Magazines, Papers, &c.

REVIEWS:

De Bow's Commercial Review of the South and West	$5 00	per year.
Four volumes are now completed—handsomely bound.		
Hunt's Merchant's Magazine and Commercial Review,	5 00	do.
Ten volumes of the above Magazine are now completed, and can be had.		
The Democratic Monthly Review,	5 00	do.
The Edinburgh, London, Foreign and Westminster, Quarterly Reviews,	3 00	do.

TERMS—Any one Review, $3; any two, $5; any three, $7; any four, $8.

MAGAZINES:

The Knickerbocker,	$5 00	per year.
The Eclectic Magazine of Foreign Literature,	6 00	do.
Blackwood's Edinburgh Magazine,	3 00	do.
Graham's American Monthly Magazine,	3 00	do.
Godey's Magazine and Lady's Book,	3 00	do.
Columbian Lady's and Gentleman's Magazine,	3 00	do.
Union Magazine,	3 00	do.
Sears's Family Magazine for the Diffusion of Useful Knowledge,	2 00	do.
Litell's Living Age, Weekly,	6 00	do.

MEDICAL WORKS:

The London Lancet, Monthly,	$5 00	per year.
The New York Journal of Medicine, Bi-Monthly,	3 00	do.
The American Journal of Medical Science, Edited by Isaac Hays, M. D., Quarterly.	5 00	do.
The New Orleans Medical and Surgical Journal,	5 00	do.
Rankin's Abstract of the Medical Sciences, Half Yearly,	1 50	do.

Orders for Medical Works received and promptly attended to.

NEWSPAPERS;

NEW YORK PAPERS.	*pr. year.*
Bennett's Weekly Herald,	$3 00
Do. Daily do.	7 50
Sunday Dispatch,	2 00
Wilson's Monthly Dispatch,	25
Weekly Mirror,	3 00
Daily do.	6 00
Home Journal, Weekly,	2 00
New World, do.	2 00
Truth Teller, Weekly,	3 00
Old Countryman, do.	3 00
Island City, do.	2 00
National Police Gazette,	
PHILADELPHIA PAPERS.	*per year.*
Philadelphia Saturday Courier,	$2 00
United States Saturday Post,	2 00
Neal's Saturday Gazette,	2 00
Philadelphia Saturday Gleaner,	1 00

ENGLISH PICTORIAL PAPERS, received regularly by every steamer—Illustrated London News, 25 cents each; Pictorial London Times, 25 cents each; London Punch, 20 cents each.

The subscriber is also continually receiving the Cheap Publications, as they appear in Boston, New York, Philadelphia, &c. He also keeps on hand a good assortment of STATIONERY, which he sells at the lowest prices. Strangers and citizens are respectfully invited to call at the Depot.

J. C. MORGAN,

Exchange Place, adjoining the Post Office.

ORANGE ISLAND PLANTATION.*

Plantation for Sale, with 430 Shares of Citizens' Bank Stock.

This Plantation is situated ten miles west of New Iberia, and fronting fifty acres on Lake Peigneur, and is in the Parish of St Martins, Attakapas, Louisiana. It contains upward of 4,000 acres of Land, including 700 acres of woodland, and is arable. It is one of the best stock farms in the State; and as a sugar estate, is equal to any in this section of the country.

Improvements.—Dwelling House, with Orchard of all fruits; Lawn; Live-oak and Magnolia Groves; Garden, Kitchen, Servants' quarters, Dairy, Corn-house; Stables large enough to contain eighty horses; good Sugar-house, Mill, Apparatus, &c., for four hundred hhds. Overseer's house, Negro houses; Blacksmith's shop, Baggass sheds, and sheds for cane. Corn field of 600 acres. Whole land well ditched and fenced—Pastures fine, and capable of supporting 4,000 head of cattle, winter and summer, with a range of salt water marsh.

Lake Peigneur is fresh and sweet, and abounds with fine fish.

Plantation will be sold with or without the Negroes (being thirty in number), and stock of every kind: Mules, Mares, Horses, Cows, Sheep, Oxen, Stallion, in large numbers.

TERMS: $15,000 cash, $18,000 assume loan from Citizen's Bank—the rest payable in three years without interest, or five years with interest.

* We commend this beautiful estate to the attention of those who may be disposed to invest in that garden spot of the world, the Attakapas region of Louisiana. The editor has visited the place himself, and cannot speak too highly of its advantages. Nothing could be more attractive in every respect. Information in regard to the estate, which can be bought on reasonable terms, may be had on application, post-paid, to the office of the Review, or to Mr. John J. Miller, New Iberia, Louisiana. A large portion of the tract is admirably adapted to the rice culture.—Ed.

Valuable Sugar Plantation for Sale.—1701 Arpents on nearly Eight Years' Credit, without Interest.

A portion of the well known lands of Isaac Baldwin, in the Plaisance Settlement, eighteen miles above Alexandria, on Red River, with the following improvements: 600 arpents, well cleared and ditched, and abundantly fenced with cypress, and several bayous running through it (and one from the field). This land, with the exception of a very small portion, is far above the highest point the water has ever reached, and is thus secured forever against overflows. It is a historical fact, that in this settlement are the only alluvial lands in the Mississippi Valley that are not subject to inundation. The tract here offered for sale is nearly all susceptible of cultivation, and has great advantages for raising stock; the river here forming an angle gives a front to two sides of the tract and three miles in length, while the third and lower side line is formed by the large Bayou Darro, upon which is one of the best locations on the river for a saw mill.

These lands have always been highly productive, and are equal to any in the State for the culture of sugar cane, cotton and corn. In their vicinity are some of the largest sugar plantations in the parish, yielding an average of 1900 pounds of good sugar to the arpent. The tract will be sold a great bargain, and is offered on the following

TERMS: At $20 per arpent, payable as follows: one-eighth of the amount payable on the 15th of January in each of the years, 1850, '51, '52, '53, '54, '55, '56, and '57. Immediate possession will be given. In the event of the land not being sold before the 1st of January next, the proprietor would be willing to form a partnership with a gentleman who can furnish from 25 to 40 hands. For further particulars apply to JACOB RINGGOLD, Alexandria, La.

N. Rillieux's Sugar Apparatus.—Howard's Vacuum Pans.

To Planters who wish to make their Sugars entirely by steam, the *N. Rillieux Apparatus* is known to be the cheapest that has yet been introduced, and it is acknowledged, even by those persons using other kinds, as being superior as regards simplicity, economy of fuel, and in the perfection of the sugars made by it. Merrick & Towne make eight sizes of this Apparatus. Each Apparatus is composed of three vacuum pans, a pumping engine, the syrup and cane juice clarifiers—bone black filters required for each size—two blow-ups for molasses, wrought iron vats for filtered cane juice, syrup and molasses, all the connecting pipes, troughs, valves, cocks, &c.—a bone black revivifier and small steam engine to carry it. The whole set up, complete and running, at the following prices.

The Terms: One-tenth cash, on delivery, and the balance out of the first and second crops.

Size No.	1,	capable of making in 24 h.	6000 lbs.	first sugars,	$ 7,500
do	2	do	12000	do	11,000
do	3	do	18000	do	14,500
do	4	do	24000	do	18,000
do	5	do	30000	do	21,500
do	6	do	36000	do	25,000
do	7	do	42000	do	28,500
do	8	do	48000	do	32,000

These Apparatus do not require more room than kettles, nor is it necessary to have a new building for them. The brick and carpenter's work is to be done at the expense of the planter, and does not exceed five to eight per cent. of the above price for each Apparatus.

Messrs. Merrick & Towne, the builders of these Apparatus, having all the tools and necessary facilities, are prepared to furnish to planters any other kind of complete Steam Apparatus that they may want, upon cheaper terms than any other foundry in this country. They are ready to furnish either the Howard or Rillieux Vacuum Pans, delivered in New Orleans, complete, with all the cocks, valves, thermometers, vacuum gage, condenser and air-pump, lined with brass, at the following prices—

Size No.	1,	capable of making from	28 gal. syrup,	6000 lbs.	sugar,	$1,500
do	2	do	do	12000	do	1,760
do	3	do	do	18000	do	2,070
do	4	do	do	24000	do	2,330
do	5	do	do	30000	do	2,550
do	6	do	do	36000	do	2,820
do	7	do	do	42000	do	3,080
do	8	do	do	48000	do	3,340

W. E. THOMPSON, 13 Canal Row, Agent for
Merrick & Towne, of Philadelphia.

THE

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ART. I.—THE WATERS AND VALLEY OF THE MISSISSIPPI.

REVIEW OF THE REPORT OF DR. M. W. DICKESON AND ANDREW BROWN, A. M., ON THE RIVER MISSISSIPPI. TO THE AMERICAN ASSOCIATION FOR THE PROMOTION OF SCIENCE. 1848.

1. THE aggregate quantity of water discharged by the Mississippi is 14,883,360,636,880 cubic feet.*

1. The mean annual quantity of water discharged by the river Mississippi, may be estimated at 33,732,864,000,000 cubic feet; the extent of the Mississippi valley being 1,210,000 square miles.

The quantity of water which a river discharges per second when at its highest stage, is, according to Prony, equal to the number of cubic meters which we obtain by dividing the superficial area of the valley in square meters by five millions.

In American measure for the Mississippi valley, it would be 22,141,000 cubic feet per second, while the above mean annual quantity of water discharged has been estimated at 1,069,661 cubic feet per second, which is only one-twentieth part of that which is discharged by the river, at its highest stage.

The above adoption of Prony is however too small for rivers in mountainous countries.

The supply furnished to the river Mississippi is, therefore, from each square mile of valley at the highest rise of the river, about 18 cubic feet; and for the mean annual quantity of water discharged by the river, the supply from each square mile is estimated at about 0,88 cubic feet.

2. The velocity assumed for the waters at the several stages of elevation, which constitutes an essential element in the calculations, is not that of the central current, but the mean of the lateral quantity, obtained by many and repeated experiments and computations, which give a mean amount very sensibly less than the central, and which are variable under varying conditions.

But it must be observed, that while these sensible variations of current exist in the lateral expansion of the waters in the river, it has proved impossible to detect any appreciable difference of velocity in their vertical quantity. It is no unusual thing for very tall trees to float down the deepest part of the river in a perfectly perpendicular attitude, caused by their butt ends being of greater specific gravity than the water, while their tops or upper ends are so buoyant as often to project as much as fifteen or twenty feet above the surface of the water.

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* In every instance with the passages marked 1. 1., 2. 2., 3. 3., the first in order is from the Report of Messrs. Dickeson & Brown, and the next our comments.

They are found to be at all times transported with the same velocity as the surface current, and while they are thus floating in a vertical position, their lower ends approximate the bottom so closely that they often strike the protuberances projecting therefrom, by which they are thrown down at such angles as often to make their tops disappear below the surface until they have surmounted the obstruction; and when such is the case, they at once erect themselves as before.

The observations made by these gentlemen, lead them to the conclusion, that in a descending aqueous fluid there is no appreciable difference of velocity in the vertical quantity, but that it is equally the same at top or bottom, for the reason that the superincumbent pressure urges forward the under-stratum to the point of least resistance, with the same acceleration of speed which the incumbent water itself may have acquired.

2. In a regular and straight river the greatest velocity of the water is in the middle, and decreases toward the bottom and sides.

The adhesion of the water to its bed and the cohesion of the particles to each other, cause those lying nearer to the sides of the bed to be retarded in their motion, and hence, to flow slower than the more remote. For this reason the velocity diminishes from the surface downward to the bed, and is least near the sides or at the bottom.

Let the velocity of the water at the surface of a river be four feet, and the depth sixty feet, we have, according to Prony, the mean velocity of this vertical depth $0{,}915 \times 4 = 366$ feet, and that at the bottom $0{,}83 \times 4 = 3{,}32$ feet.

The rod of Cabeo is generally used for measuring the mean velocity of a vertical depth. It consists of a cylindrical rod of tin, which is divided into feet, and which can be loaded at its lower end with lead, so as to sink it near the bottom, without touching it during the experiment. The rod extends a few inches above the surface of the water in order that it can be seen by the observer without being affected by the wind.

The mean velocity of the water in a cross-section of a river we obtain by dividing the discharged quantity of the water per second by the area of the section.

The mean velocity of a cross-section is different from that of a vertical depth of water, because this is only the mean velocity of a line, while the other is that of a plane.

3. The Mississippi valley is found to contain a superficial area of very little short of fourteen hundred thousand square miles. The inquiry, therefore, here suggested itself, what may be the relative difference between the annual quantity of water falling into this valley and the annual quantity discharged out of it by the river Mississippi. It is found by an examination of the Meteorological Register of the late Dr. H Torly, of Natchez, that the mean annual quantity which falls at Natchez, is between fifty-five and fifty-six inches; but as such has been taken at the southern extremity of the valley, it may be regard-

ed as an over estimate for the whole area. The mean quantity is, therefore, assumed to be fifty-two inches, and then, by calculation, we will have 169,128,960,000,000 cubic feet, as the quantity which falls annually in the whole valley, which is within a fraction of being twelve times the quantity of that which is discharged by the river.

3. The extent of country which the Mississippi river and its tributaries drains, is, according to De Bow's Commercial Review, vol. IV, page 37:

	Square miles.
Valley of the Ohio,	200,000
" " Mississippi proper,	180,000
" " Missouri,	500,000
" " Lower Mississippi,	330,000
Area,	1,210,000

The mean annual quantity of water which falls in the valley is not every year the same, and it decreases in general with the distance from the sea.

The river Mississippi would be an ombrometer on a large scale, if correct observations were made of the height of the surface of the river during the year, and the comparison of several years would show in how far the quantity of rain had remained constant.

The mean annual quantity of water which falls in the whole valley, drained by the river Mississippi, may be assumed, according to Berghaus & Forry, at 36 inches, and then by calculation we will have $5280 \times 5280 \times 1{,}210{,}000 \times 3 = 101{,}198{,}592{,}000{,}000$ cubic feet, as the quantity of water which falls annually in the whole valley, of which one-third is assumed to be discharged by the river.

From the measurements and calculations of Arago, Hagen, &c., it appears that the quantity of water which is discharged by the rivers in Europe, is, in general, hardly one-half of that which falls as rain or snow in the whole river valley, and that the rivers owe their origin to the atmospherical precipitation. Besides, it is well known that agriculture is far more extended in Europe than in the valley of the Mississippi.

4. There are but two ways by which all this immense quantity of water can make its escape from the valley; one of which is by the course of the river into the gulf of Mexico, and the other by evaporation. Hence, we perceive, that there is but one relative part of this quantity passing off by the river for every eleven parts which are exhaled by the atmosphere; or, in other words, one-twelfth by the river and eleven-twelfths by evaporation.

4. There are but two ways by which all the immense quantity of water can make its escape from the valley of the Mississippi, one-third of which is by the course of the river and its braches into the Gulf of Mexico, and the other two-thirds by evaporation.

5. Thus we arrive at the development of a fact of the most momentous importance to the planting interests of Louisiana and Mississippi, for it will be readily perceived, that the more exhalation is promoted, the less liable will the lands of these two States be to the periodical inundations of the river. It may be asked, by what process can we expect to promote evaporation, so as to cause such an increase of quantity as to sensibly benefit the planting interests, and that, too, over such a vast extent of surface as is contained in the expansive area

that comprehends the Mississippi valley. The answer is, that the progress has been, and is now, in a rapid state of prosecution, and of that kind which is the best calculated to produce such an effect—namely, the clearing of the lands of their primitive forests, and their consequent exposure to sun and atmosphere, the very best promoters of the evaporating process on so extensive a scale. It will not be difficult to perceive the vast difference there must necessarily be in the quantity of evaporation from a surface of country exposed to the action of sun and winds, and one covered with a dense forest, where neither can penetrate but with difficulty.

The lands of the Mississippi valley are so subject to this increase of exposure, that we may hazard the assertion with safety, that there is not by twenty or twenty-five per cent. as much water now passes down the Mississippi, annually, as there was twenty-five years ago. This conclusion is not arrived at hastily, but by patient observation of the circumstances in connection therewith during all that lengthy period, at whose beginning there were annual inundations of almost all the low or bottom-lands, and for very lengthy periods of submergence of almost all the bottom-lands, from the Bluffs or Highlands on one side of the river bottom to those of the other side, and to such a degree, that but little or no hopes were entertained of the practicability of their redemption by any artificial means, that is, on any scale. But such has been the diminution in the annual quantity of water discharged from the valley, that those lands have been progressively and rapidly redeemed from overflow, until very great portions of them are now in the highest state of cultivation, and with but comparatively slight assistance from art, in the way of embankments, and these such as would not have been at all available against the overwhelming effects of former floods, and the length of time of their continuance; for then there were lengthy and annual inundations, both deep and expansive, of the waters over almost all the bottom-lands. But now the river seldom rises to the same elevation as formerly, and when it does, it is of much shorter duration, and the waters are almost exclusively confined to the channel of the river, in place of being spread over almost all the bottom-lands the whole spring and early part of summer. All the advantages are progressively and rapidly extending themselves, while the causes remain unsuspected or overlooked, but none the less secure. As a further evidence of the altered condition of this river, we may mention the circumstance, that, in former times, the steamboats ascending or descending the river, were detained about half of their time by dense fogs; while now hardly any such obstructions prevail, so that packets succeed in making their trips to an hour, with no fears of such a retardation. Assuming that the diminution of the waters will continue in somewhat the same ratio they have recently done, *the time cannot be very far distant when all apprehension from inundation will have in a great measure passed away.*

We will further remark, as an evidence of change, that the quantity of floating timber or drift-wood passing annually down the river, has diminished in a far greater ratio than that of the water, so that the aggregate quantity cannot now be over fifty per cent. of that which formerly passed down.

5. It must be admitted that the extension of agriculture has con-

siderably diminished the discharge of many springs and creeks, and may have decreased the atmospherical precipitation. Although the loosened ground becomes at present sooner dry than formerly, when covered with grass and other vegetation, and springs and creeks have become perfectly dry which formerly furnished an ample supply of water—yet experience has shown, that the mean annual height of the surface of the large rivers of Europe has remained nearly the same for a period of one hundred years—during which time correct observations have been made. And if a diminution of the waters of the river Mississippi should actually take place, by the extension of agriculture, the time must be very far distant when all apprehension from inundation will have in a great measure passed away.

If the rain should fall on an impenetrable plain it will become evident, by comparison of the annual quantity of water which falls with that of evaporation, that no accumulation would take place, but it would become sometimes entirely dry in the course of the year: but on the surface of the earth we find that a part of the rain is absorbed by the ground, and the other remaining part flows toward the depressions and into the river to the sea. In both cases the evaporation is diminished, because the water which enters the ground is withdrawn from the effects of the air, and the surface of the river which comes in contact with the air is so small that the evaporation is much decreased.

The extension of agriculture, and the erection of embankments, exercise also an essential influence on the elevation of the bed of the river. The water which falls on the loosened and drained ground can carry along into the river a greater quantity of heavy materials, which elevate the bed and the adjacent lowlands which it overflows, and the inclosed low bottoms cease to become higher. The increased quantity of heavy materials which are carried into the river may produce a local elevation of the surface of the river, and demand the erection of embankments, to protect the adjacent low bottoms from overflow. This phenomenon or local elevation of the bottom, will prove that a diminution of the quantity of water discharged by the river may take place and yet the surface of the river become higher.

The bends which form and destroy themselves again, contribute mainly to the constant transformation of the course of the river, and produce, therefore, sometimes an elevation and sometimes a lowering of the surface of the river. The straightening of the course of the river, or destruction of these bends, is perhaps one of the causes that the river, above the Delta, does not rise to the same elevation as formerly. The extension of agriculture affords not only a greater supply of heavy materials to the river, and a quicker supply of water, but renders the flood more sudden and of much shorter duration.

From the above it must be obvious, that the promotion of the speedy discharge of the water in the river, must be considered as the most important object of the regulation of the river.

By the erection of proper works and availing ourselves of the velocity of the current, we will not only succeed in maintaining the present depth of water, or prevent the deposit of heavy materials and the height of the surface of the river, but in many cases may produce a greater lowering or depression of the surface than actually is desirable. But no person will believe that the time is not far distant, when, by the diminution of the quantity of water in the river Mississippi, all apprehension from inundation will pass away, although the country may become more exposed to the effects of the sun. The fogs arise generally when the water of the river and the moist, low bottom-lands are warmer than the surrounding moist air. The steam which is formed by the high temperature of the water and low bottom, is condensed as soon as it is diffused in the colder moist air; and in the same way the fog may be formed when the moist air is warmer than the water. The observations which have been made can hardly justify us in stating that the climate of the lower Mississippi has altered, or that it has become warmer or colder. The less moist the air, the sooner it will absorb the water and the greater will be the evaporation from a plain of water which comes in contact with it. If the air becomes warmer it will absorb more water, but if it becomes cooler it will eject a part of the water. The latter separates itself, as a visible and moist fog or cloud, from the former entirely transparent air, and as the fine particles unite by degrees to drops, they fall down as rain. Those plains which are covered with trees, and therefore not exposed to the sun, remain cool and moist, and present to the circulating warmer air, only a colder, with water-saturated current of air. In its neighborhood we will therefore observe more frequent rain. Deserts of great extent, which are entirely exposed to the heat of the sun, communicate anew the warmth, which they have received to the surrounding air, and increase thereby its capacity for the reception of the water. The meeting with a cooler saturated current of air produces no more precipitation, and the dryness of the land is even the cause of the scarcity of rain. In Upper Egypt, the rains were formerly very frequent, but since the Arabs have cut down the trees, the quantity of rain has considerably diminished. The clearing of the lands in the valley of the Mississippi of their primitive forests, and their consequent exposure to the sun, may also, according to the above, decrease in some measure the mean annual quantity of rain, or the mean annual quantity of water which the river discharges.

6. We will give you now (proceed the committee) the quantity of solid matter with which the waters of the Mississippi are annually charged, together with its effects in the formation of lands or filling up of depressions. The quantity of sedimentary matter contained in the water to the volume of the river, or in other figures and words, the mean proportional quantity of sediment to the river is as 1 to 528.

6. Professor Lyell states, that the mean amount of sedimentary matter in the waters of the Mississippi river is 1 in 1800 by weight, and 1 in 3000 by volume; and Professor Riddell found by experiments 1 to 1245 by weight, and 1 in 3000 by volume. (Vide De Bow's Commercial Review, vol. II, page 439.)

7. We have already ascertained the quantity of water annually discharged by the Mississippi river to be 14,883,360,636,880 cubic feet, there must then be deposited from that quantity of water 28,188,053,892⅛ cubic feet of solid matter.

7. The mean annual quantity of water discharged by the river as before stated being 33,732,864,000,000 cubic feet, the annual discharge of solid matter will be $\frac{33,732,864,000}{3000} = 11,244,288,000$ cubic feet.

8. Being in possession of the data by which may be computed, with some approximation to certainty, the effects of the Mississippi deposits in the formation of land, or in filling up the Gulf into which it is emptied, we will avail ourselves of such data and endeavor to present the quantities deducible therefrom. In estimating the Delta of the Mississippi, we have adopted for it the superfices assumed by Dr. Lyell, in his investigation of this subject, and will say with that gentleman, that the Delta of the Mississippi river comprehends all that great alluvial plain which lies below or to the south of what, until recently, was the first branching off or highest arm of the river, called the Atchafalaya. This Delta is computed to contain a superficial area of 13,600 square miles.

In deciding on the depth of this quantity, we will adopt that which was assumed by Professor Riddell on this subject, and say, that it is of the average depth of one-fifth of a mile, or 1,056 feet, inferred from that being the average depth of the Gulf of Mexico from the Balize to the Gulf of Florida.

8. The Delta or the alluvial plain, which lies below the Atchafalaya, is taken at 13,600 square miles, and its mean depth at 1,056 feet.

9. We find by computation, agreeably to the above data, that it would require a quantity not less than 400,378,429,440,000 cubic feet, or 2,720 cubic miles of solid matter, to constitute this Delta, having ascertained the quantity of solid matter annually brought down by the Mississippi river to be 28,188,083,892 cubic feet, which would be equal to one square mile of the depth of 1,056 feet in 381⅕ days, or one cubic mile in 5 years and 31 days—it therefore follows that it would require a series of 14,203⅘ years for the river to effect the final formation of the present Delta.

9. The square mile of this Delta will, therefore, contain 5280 × 5280 × 1056 = 29,439,590,400 cubic feet, and it would require

$$\frac{29,439,590,400}{11,244,288,000} = 2,618 \text{ years to deposit one square mile of the Delta.}$$

The formation of the present Delta would, therefore, have required 13,600 × 2,618 = 35,605 years.

Vast quantities of mud have no doubt been carried far beyond the Delta into the Gulf; while on the other hand the coarser matter, which the river carried along at its bottom, was deposited in the Delta. Besides, the bottom-lands of the river Mississippi have not exclusively been formed by the present river Mississippi, judging from the gradation of the deposits, because their formation required stronger currents, and to bring these deposits from the mountains perhaps other forces of nature may have co-operated. From this we may conclude that the present Delta has been deposited by the river in a far less number of years, than we have found by the above calculations, and perhaps within the Mosaic history.

Professor Lyell says, that the time required for the accumulation of matter found in the Delta and valley of the Mississippi, must have been 67,000 years; and another 33,000 years must have been required for bringing down to its present position the great deposit above.

Professor Riddell has calculated that the Delta below Baton Rouge occupied in its deposition 119,250 years. (De Bow's Commercial Review, vol. II.)

Dr. Dickeson calculates the time required for the formation of the present Delta 14,204 years—taking the sedimentary matter suspended in the water as 1 in 528 by volume; but taking it more correctly at 1 in 3000 by volume, we obtain 80,703 years.

Mobile, May 1849. ALBERT STEIN.

RECAPITULATION.

	Inches.	Inches.
1.—The mean annual quantity of rain which falls in the Mississippi valley,	52	36
	Square miles.	Square miles.
2.—The superficial area of the Delta,..	13,600	13,600
	Square miles.	Square miles.
3.—The superficial area of the Mississippi valley, ...	1,400,000	1,210,000
	Cubic feet.	Cubic feet.
4.—The mean annual quantity of water, which falls in the valley,........	169,128,960,000,000	101,198,592,000,000
5.—The quantity of water, discharged by the river, is of that which falls in the valley,.................	1-12	⅓
	Cubic feet.	Cubic feet.
6.—The mean annual quantity of water discharged by the river,.........	14,883,360,636,880	33,732,864,000,000
7.—The sedimentary matter suspended in the waters of the river,.......	1 in 528	1 in 3,000
	Cubic feet.	Cubic feet.
8.—The mean annual quantity of solid matter carried along by the river,	28,188,183,024	11,244,288,000
	Feet.	Feet.
9.—The depth of the alluvial formation,	1,056	1,056
	Cubic feet.	Cubic feet.
10.—The contacts of one square mile, the depth being 1,056,..............	29,439,590,400	29,439,590,400
	Years.	Years.
11.—The time required to deposit one square mile,..................	1,044	2,618
	Years.	Years.
12.—The number of years required to form the present Delta,.........	14,204	35,605

The sediment of the water is only 1 in 1800 by weight. or 1 in 3000 by volume. The time required for the accumulation of matter found in the Delta 67,000 years.—*Professor Lyell.*

The sediment of the water is 1 in 1245 by weight.—*Dr. Drake.*

The amount of sedimentary matter is 1 in 1245 by weight, and 1 in 3000 by volume.—*Professor Riddell.* (Vide De Bow's Commercial Review, vol. II, page 439 and 440.)

ART. II.—MANUFACTURE OF SUGAR.

A DISSERTATION UPON THE EVAPORATION OF SACCHARINE LIQUIDS.[*]

The question, what is the best method of evaporating saccharine liquors, is not yet solved. Upon this subject we possess scientific truths, and the results of manufacturing industry. And it is now requisite to connect the principles with the results of experience, so as to combine them with the question of economy, which governs all industrial operations.

The following extracts, relative to the action of heat upon sugar, are from the chemistry of M. Dumas.

Air produces no alteration upon sugar during evaporation.

Water, maintained in ebullition during fifteen or twenty hours, mortifies the sugar which it holds in solution; it is converted into glucose or uncrystalizable sugar.

In heating sugar to 180°, it enters into fusion; in this state it is not changed; it forms a viscous, colorless liquid; but as soon as it is raised above that temperature, it turns brown and loses water at the expense of its composition, which is then materially modified. Abandoned in this condition to moist air, it absorbs more water than it has lost, and becomes deliquescent; treated with alkalies it is strongly colored under their influence.

If it is brought to the temperature of 210° or 220°, and maintained at that point, without being permitted to go beyond, the sugar is seen to swell, and a lively and almost spontaneous reaction takes place among its elements; the sugar then has a brown tinge which gradually becomes deeper. This product is perfectly soluble in water, and the solution, which presents a rich sepia tint, has no longer the sweet taste of sugar. It is quite as insipid as gum arabic itself. Under the influence of a fermenting substance it exhibits no sign of fermentation. This substance, which is analogous to the caramel of commerce, M. Peligot has designated by the name of caramel or caramelic acid.

At 211° or 220° sugar is converted into caramel by looing three atoms of water; at a higher temperature, it produces inflammable gasses, pyrogenous oils and acetic acid, and it leaves a residue of carbon equal to one-fourth of its weight.

M. Biot, with the aid of his instrument of polarization, observed that a solution of crystalizable sugar, heated only in a water bath, is modified, from instant to instant, in such a manner that, at the end of about twenty-five hours, its nature is entirely changed, and the crystalizable sugar becomes uncrystalizable. He has observed also, that this modification of sugar is as much more rapid, as the temperature at which the solution is maintained is more elevated; that acids promptly transform crystalizable into uncrystalizable sugar; and that this change takes place with very great rapidity, when to the action of an acid that of heat is added.

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[*] By evaporation of saccharine liquids, we understand here the extraction, either partial or total, by means of evaporation, of the water which holds the sugar in solution.

All the temperatures of which we shall have to speak, will be expressed in degrees of the centigrade thermometer, unless signified to the contrary.

This paper was translated from the French of E. Degrand, Civil Engineer, Paris, 1845, by Woods Baker, Esq., for Professor McCulloh of Philadelphia. We are indebted to Prof. McC. for the manuscripts, which must have great interest with our sugar planters.

These scientific data throw much light upon the question under consideration. Let us now examine whether the facts obtained in manufactories confirm them.

An exclusive privilege was granted, on the 7th May, 1780, for fifteen years, to the brothers Boucherie, sugar refiners of Bordeaux, for the use of their processes of refining. One of these processes consisted in evaporating their clarified syrup in three hours, at the temperature of 85° R*, in order, they stated, *to avoid the decomposition, effected by the fire, of a large portion of the sugar to be refined.* Having then observed, by long practice, that evaporation in forty or forty-five minutes was no injury to the crude sugar purified by their process, the brothers Boucherie substituted this evaporation, which they called *rapid*, for the evaporation in three hours, although the latter was accomplished at a lower temperature; and they introduced this substitution into their patent of the 29th October, 1791.

This privilege, and this patent, showed that refiners had observed, during many years,

1st, That in preparing the clarified syrup, fire decomposes a portion of the sugar it contains.

2d, That the loss of crystalizable sugar, due to this decomposition, is caused, not only by the temperature to which the syrup is brought in order to evaporate it, but also by the combination of this temperature with the time during which it acts.

About the year 1800, Achard, of Berlin, attempted, in evaporating the juice of beets by exposure to the air, the plan of heating by steam at low pressure, which would not raise the temperature of the juice beyond 70°. From this resulted an evaporation which lasted whole hours, and which rendered uncrystalizable a good portion of the sugar contained in the juice.

In 1791, the refiners treated the syrup in vessels fixed firmly over their furnaces. A part of the sugar in these vessels became caramelized whenever they were emptied; for the syrup, which remained in a thin layer, passed to a temperature exceeding 215°.

In order to prevent this wastage, it became necessary to remove the kettle from the direct action of the furnace, and to cover immediately the thin layer of syrup with a fresh charge. From this originated the bascule pan, due to L. Chr. T. Guillon, sugar refiner of Orleans.†

The general adoption of bascule pans, prior to 1810, shows that refiners knew already, that, at the temperature of 215°, sugar passes into the state of caramel.

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* This temperature corresponds to 223¼° Fahrenheit.

† This same Guillon, under the firm of Benoit, Piniau & Guillon, demanded, on the 27th August, 1804, a patent for fifteen years, for different processes of sugar refining. especially for purifying and decoloring by means of any kind of carbon except that made of turf, and for the revivification of the charcoal. This patent was delivered on the 21st May, 1805.

I have thought it well to mention this fact, because it is either unknown or forgotten.

There were then but a small number of manufactures of beet sugar who struggled with the difficulties of a growing industry. They studied simultaneously the washing of the root, the rasping, the expression of the juice, its defecation, filtration, evaporation and crystalization, and yet were not able to assign to each of these operations its influence upon the result in sugar which they obtained. At first they made use of kettles subjected to the direct action of the fire. Soon after, the example of the refiners caused them to adopt the bascule pans. From this period different kinds of pans were proposed and tried: some heated by steam, others by fire directly—some by successive charges, others continuously, and all freely exposed to the air.

While these facts were manifested in France, others were produced in England, having likewise for their object the reduction of the temperature in the evaporation of saccharine liquids. Ph. Taylor, T. Smith, W. Fawcett, Beale and Porter, concentrated syrups in apparatus, all dissimilar to each other, but all submitted to atmospheric pressure, and employing vapor as the vehicle of heat; Daniel Wilson heated syrup by means of the circulation of boiling oil; Cleland heated it by the circulation of hot water; John Davis tried the Torricellian tube and renounced it for agitators with vanes; Cleland employed, as a means of heating, a metallic worm filled with steam, turning at the surface of the syrup; Kneller, Knight, Hague and Crasley, heated by introducing a blast of hot air.

The most fortunate and the most important of the English innovations, is that of the apparatus for evaporating saccharine solutions in a vessel protected from atmospheric pressure. Several English writers attribute the first idea of it to Davy.* However this may be, Ed. Ch. Howard took out a patent for this invention, on the 20th November, 1813.† In his apparatus, the syrup heated by steam at the temperature of 104° to 107° cent., is concentrated in a close vessel, under a pressure of 0.05 to 0.06 of an atmosphere, and the vapor of the syrup is liquified

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[*] I think that France might claim this honor for Ph. le Bon, engineer of Paris, to whom was delivered, on the 11th September, 1796, a patent for fifteen years, for distilling by means of a vacuum and cold, a patent, a specification of which may be found in the first volume of expired patents, page 361, et seq.

After having exposed the means by which nature produces immense distillations with promptness, Le Bon indicates how these means may be combined to form a very large number of arrangements for the use of man. Among these various kinds of apparatus, there is one in which a vacuum is formed and sustained by a tube of Torricelli; another in which the vacuum is formed and sustained by a pump, destined to pump the gasses which the liquids submitted to distillation disengage, the condensed liquor itself, and a part of the vapor which the pressure of the pump may convert into a fluid. He applies, besides, heat to the fluid to be distilled, or he turns to profit ice, and the rigor of winter, as substitutes for fuel. Distillation, he adds, is thus made at extremely low temperatures.

He then indicates different applications, particularly for the formation of salts, and in general to separate and collect any compounds, whatever may be their constituent parts, fixed or volatile.

[†] There are two patents of Howard, the first of the 31st of October, 1812, the second, of the 20th November, 1813. The translation of the latter may be found almost entire in the *Industriel* for December, 1828, p. 329 to 423, plates 19 and 20. Howard describes the clarification of brown sugar, the melting of the same sugar, and the base products of refining. He mentions several ingredients for clarification. He says that the strike may be withdrawn when imperfect, and the crystals made to form in it afterward. And he speaks of evaporation in vacuo to the consistence of solidity, etc.

and cooled, by a continued injection of cold water, in a condenser, similar to that of Watt's steam engine. Two conjoined pumps remove: the tepid water resulting from this condensation; the air, which the cold water holds in solution under the pressure of the atmosphere, and which becomes free in passing into a medium whose tension is nineteen times less; the air which may have been introduced into the apparatus through the moveable and stationary joints; and the uncondensed gasses, if the syrup disengages any. Depending upon the principle, that as much less crystalizable sugar is lost as the temperature for heating and evaporation is reduced, Howard fixed this temperature as low as possible—conforming to the usual mode of working among refiners, that of successive charges. Such was the superiority of the practical results obtained by this apparatus, that the English refiners adopted it, notwithstanding the patent right (which required a duty of 2f. 65c. per metrical quintal of brown sugar used); notwithstanding also its high price, the large quantity of cold water it required, and its great consumption of fuel. So true is it that it is more important for the manufacturer to obtain a greater result in sugar than it is to reduce the first cost and even the daily expense.

In making the Howard apparatus, different French constructors have supposed that they might release themselves from the conditions of low temperature, to which it is subjected in England. Instead of heating with steam at 104° or 107°, they have heated at 150° on an average; and instead of reducing the pressure of the steam upon the syrup boiling in the close pan, to five or six-hundredths of an atmosphere, they have reduced it only to two-fifteenths of an atmosphere. Such at least are the constructions of MM. Derosne and Cail, which they have termed perfect apparatus. By means of this inversion of the normal conditions of the invention of Howard, there was evaporated in an apparatus of small dimensions, in a given time, as much syrup as was evaporated with a much larger apparatus of English construction. But the injury of more crystalizable sugar was also a result. Starting in this wrong course, MM. Derosne and Cail constructed the apparatus of Howard so as to bring the syrup to a concentrated condition; and thus have produced a sugar so modified, that it passes into a pastry state upon contact with the air. Improvements of this kind are retrogradations of a marked character.

The work executed with Howard's apparatus shows that very beautiful sugar may be obtained, even when the concentrations are conducted by successive charges, provided the evaporation is carried on at low temperatures for heating and boiling; it proves, also, that with the same apparatus, no good results are produced when these conditions are misunderstood.

The apparatus of Dégrand, otherwise termed the double-acting-vacuum apparatus (l'appareil à vide à double effet), is distinguished from that of Howard in this, that instead of condensing the vapor given off by the closed pan, by an injection of cold water, it is condensed by the vaporization of a mass of water or of saccharine juice, which is made to flow over the exterior surface of pipes into which the steam to be condensed is conveyed; this vaporization is hastened by a rapid current of air flowing upon the water or upon the saccharine juice which flows upon those pipes.

The refrigerating power of the Dégrand apparatus resides in the hygrometric property of the air, which, by its contact with the liquid flowing slowly upon the pipes of the condenser and keeping them wet, causes evaporation, at the expense of the latent heat in the steam which circulates within the pipes. As air is everywhere, there is no locality where the apparatus of Dégrand may not be established. We can, at will, augment both the volume and the rapidity of the current of air for the use of the apparatus, and, by these means, reduce to the lowest possible degree the temperature of ebullition of the syrup. And finally, as the air charged with humidity is discharged into the atmosphere, the regular working of the apparatus is entirely at our disposal.

The apparatus of Howard has not this advantage. Its refrigerating power resides in the low temperature and the volume of water injected. This power, which is nothing in situations without water, and feeble in those where it is found in insufficient quantities, operates in the fullness of its energy only where cold water abounds, provided, at the same time, it may be readily discharged in the tepid condition; and this energy is also limited by the power of the pneumatic arrangement.

There are but a small number of sugar refineries which have at their disposal the quantity of water necessary for the use of the Howard apparatus; besides, since this apparatus, as seen in English refineries, is presented under the most favorable aspect, because it is there executed in its normal condition by English constructors, governed by the precepts which the inventor bequeathed to them, it is not surprising that refiners, others than the French, should buy in England the Howard apparatus, when they could not establish them in their own country exactly conformed to the English type; and as for the French refineries, there are but few of them yet which estimate at its just value the influence which a great lowering of temperature exercises upon the yield of brown sugar. Hence, the greatest number receive as good, the apparatus which is furnished them.*

Now, comparing the Howard and the Dégrand apparatus with each other, considered in their application to the manufacture of sugar, either domestic or colonial, we say that the first is single-acting and the second double-acting (le premier est à simple effet, et le second à double effet). This requires explanation.

In the application under consideration, the Howard apparatus, which, by a cold injection, condenses the vapor extracted from the syrup, renders lukewarm a considerable mass of water; and, as there is no use for this tepid water, it is rejected. Consequently, the steam which heats the syrup produces only one useful effect.

In the Dégrand apparatus, the heating steam produces two useful effects: the first, in evaporating the syrup in the closed vessel; the second, in evaporating saccharine juice upon its condenser. It is to this last evaporation that the condensation of the steam, which is generated in the closed vessel, is due.

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* It is not within my knowledge that any one of our refiners, in a bargain with the constructors of the apparatus of Howard, has stipulated what should be the temperature of the heated steam, proved by a thermometer, inserted at the point where it enters the heating worm (le serpentin de chauffe), and what should be the temperature of ebullition of the syrup (proved by a thermometer immersed in that liquid), at which the apparatus sold to them should work, in order to produce the results which the constructor may have promised.

The double effect of the Dégrand apparatus, and the facility of establishing it in localities deficient in water, have caused it to be adopted by a large number of manufacturers, and have extended the use of it to the colonies. Unfortunately, MM. Derosne and Cail have seen fit to suppress the current of air which is the essential organ of its refrigerating power. In consequence of this mutilation of the invention, all the apparatus which they have constructed, works, only at temperatures too elevated and too long continued, and thus injures a portion of the sugar in evaporation. They attempt to remedy the evil in vain, by rendering the invention more complicated, and even by partially perverting it by interposing a water condenser between the serpentine pipe and the air pump.

Such arrangements can end, and in fact have ended, only in raising the price of the apparatus beyond measure, and in diminishing its useful effect; so that the manufacturers of sugar do not yet know how the apparatus of Dégrand works in its normal conditions.*

The present state of the manufacture of sugar in France, so far as the evaporation of saccharine liquids is concerned, is as follows:

The arrangements acting continuously upon thin layers of syrup, heated by high-pressure steam and exposed freely to the air, have been abandoned, because among the numerous varieties which have been tried, none have fulfilled the condition of good working. There are some manufacturers who evaporate entirely in bascule pans, exposed to the direct action of the fire and to the air, occupying two hours and a quarter to bring the juice of the sugar beet to 18° or 20° Beaumé, and three-quarters of an hour to bring this syrup to the striking point. Some evaporate the juice in these pans to 18° or 20° Beaumé, and then employ open pans, heated by steam, to reduce the syrup to its proper density. Others, who evaporate entirely by steam, at 150°, in open pans, take thirty to thirty-five minutes for evaporation to 18° or 20° Baumé, and fifteen minutes for concentration. All these manufacturers produce sugar of good quality. Others again, evaporating entirely by the Dégrand apparatus, such as MM. Derosne and Cail construct, do not produce a sugar of irreproachable quality, but at least obtain it with economy in fuel. Still, others, by making use of the Howard apparatus, obtain a good sugar, while there are some, who, with the same apparatus, produce sugar in a pasty condition. And, finally, good results are obtained by evaporating with steam at 150° in open pans, to 18° or 20° Baumé, and then employing a vacuum apparatus, of either double or single effect, to bring the syrup to the striking point and to work molasses.

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* Extract from a letter written the 8th March last, by a manufacturer, to whom MM. Derosne and Cail sold a double-acting-vacuum apparatus:

"*The pressure of the steam indicated by a manometer is in mean terms 4½ atmospheres.*

"*Our spheroidal pan has neither thermometer nor manometer, but there is a barometer near the bottom of the condenser, which, when juice is in the apparatus, indicates about one inch of vacuum, and when there are syrups, from eight to ten inches.*"

A vacuum of one inch is what MM. Derosne and Cail term a depression of an inch. Consequently, the pressure in the pan at the bottom of the condenser is twenty-seven inches, which corresponds to twenty-seven twenty-eighths of an atmosphere. The depression of eight to ten inches corresponds to a pressure of nineteen twenty-eighths of an atmosphere. These are certainly not the normal conditions of the apparatus of Dégrand.

From the whole of these practical results it seems, that if only the quality of the sugar produced is considered, there is but little reason to prefer one kind of pan to another; but this view of the subject would be incomplete, for it is also necessary to take into consideration the coloration of the sugar more or less decided, as well as the quantities of sugar respectively produced by a given weight of beet juice, supposing all the circumstances of the manufacture similar, except the pans, or the evaporating apparatus. As for the coloration, the sugar coming from pans exposed directly to the fire, is a little more colored than that which is obtained by heating with steam at 150° in open pans; and this last does not attain to the whiteness of sugar evaporated in a vacuum apparatus. On the other hand, the quantity of sugar produced is as much greater as the coloration is less decided.*

So far, we have omitted the condition of economy. We will now submit to this condition the different classes of pans of which we have spoken in relation to their production in sugar. The kettle permanently fixed over its furnace, exposed directly to the fire and open to the air, is the most simple and the cheapest of all which have been used in the sugar manufacture. There is reason, however, to prefer the bascule pan, similarly exposed to the fire and air, although somewhat complicated and a little more costly; because the value of the sugar which escapes caramelization compensates, in a few months work, for the excess in first cost. It cannot be said, however, that the bascule pan produces no caramel at all, but it produces less than the fixed kettle.

The pans evaporating with exposure to the air, and heated by high-pressure steam, are a little more expensive than bascule pans exposed directly to the fire; but they color the sugar less and do not injure so much of it. In order to determine which of these vessels ought to be preferred, it is necessary to calculate the respective expenses which each establishment requires to evaporate, in a given time, the same quantity of water. It is evident that the high pressure steam pan is more expensive than the bascule pan, because it is more complicated, and that it requires a steam boiler of which the bascule has no need, and a furnace more costly than that of the bascule. This excess in outlay must be considered. Besides, the steam pan requiring a more active superintendance, and a better fireman than the bascule, imposes a daily expense a little greater, during all the time of the operation of either apparatus. This expense has to be counted. Reckoning, then, the increased value, and the excess of weight, of the sugar which the steam pan furnishes during all the time assigned for its operation. a comparative calculation will be established, with the accumulation of interest, crop after crop, as long as the pans last, by placing on one side the excess of outlay and the excess of expense in keeping up the repairs of the steam pan, and, on the other side, the increased value and the excess in weight of sugar due to this pan. And if the result of this comparison gives evidence, as is probable, that the high-pressure steam pan is more profitable to the manufacturer than the bascule pan, he should prefer the first through *economy*, for economy does not consist in saving a useful outlay, or in substituting for it a smaller outlay, but less profitable; it consists, on the contrary, in giving to the capital to be disposed of, the most profitable expenditure.

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* All these facts, which at the first glance seem to conflict, are readily explained by the combination of scientific data furnished by M. Dumas and M. Biot.

The form of calculation just indicated, may be applied to all the comparisons which we wish to make between any two kinds of evaporating apparatus. In order to develop it more fully, we will use figures in comparing, in an economical point of view, the apparatus of Howard and that of Dégrand with each other, in their application to the manufacture of beet sugar, which operating daily upon 290 hectolitres of juice, should vaporize 27,000 litres of water in twenty-four hours, and we will suppose that both of these machines are executed in their normal conditions.

Since the apparatus of Dégrand evaporates upon its condenser about as much water as in its closed pan, it requires a closed pan of an evaporating power of 14,500 litres per day, while that of Howard requires one of 27,000 litres to produce the same effect. Since the Dégrand apparatus has only 14,500 litres of water to evaporate in its closed pan, there suffices for its heating 15,000 kilogrammes of steam, while the apparatus of Howard demands 28,000. Consequently, the steam boilers required by the latter, cost almost twice as much as those attached to the Dégrand apparatus. The outlay for the construction of the respective furnaces, and the respective expense in fuel for the required evaporation of 27,000 litres of water per day, are in the same ratio.

When the tension of the steam in the closed pan of a vacuum apparatus is measured by a barometrical column of 89 millimetres, the temperature of this steam is 50°; and, according to the original observations of Howard, reduced to French measure, the corresponding temperature of the syrup is 62°. In order to work, under these conditions with an apparatus of Howard, 290 hectolitres of juice per day, by condensing with water at 10°, and discharging this water at 30°, 7,700 hectolitres of water should be introduced into the condenser in twenty-four hours. But we will calculate upon 9,500 hectolitres, because the syrup which is nearly concentrated requires a greater quantity of cold water than the condensed juice. This mass of water holds in solution 380 hectolitres of air at the temperature of 10° under atmospheric pressure. In passing to the temperature 30°, under a tension of 89 millimetres, this air becomes free and takes a volume of 3,475 hectolitres. Besides, the liquor submitted to vaporization may give off some uncondensable gases, and probably there is also some air introduced into the pan through some of its moving joints. For this reason it is necessary to furnish the Howard apparatus with two large double acting pumps, with pistons of the diameter of 50 centimeters, for the purpose of removing the tepid water, the air, and the uncondensed gases. These two pumps involve the necessity of a four or five horse power engine, consuming ordinarily 5.1 hectolitres of coal per working-day.

With the Dégrand apparatus it is necessary to remove, in twenty-four hours, water at 30°, resulting from the condensation of 14,500 kil. of steam, forming a volume of 146 hectolitres, besides uncondensed gasses which the evaporating liquor may have disengaged, and some air which may have found its way through the joints. Consequently, the Dégrand apparatus has no need, like that of Howard, of a powerful pneumatic arrangement. The engine applied to the Dégrand apparatus, is of a power much less than that required by the apparatus of Howard. Hence, also, the expense in fuel, for the support of the pumps of the Dégrand apparatus, is much less than that demanded by the pumps of Howard.

In sugar factories, where cold water may be had abundantly by boring wells, it is necessary to add to the cost of the Howard apparatus—first, the expense of boring, and the cost of the tube which plunges into the water. Second, the cost of the engine for raising this water into a reservoir, at a mean height of 24 meters. The power of this engine, which will raise from 9 to 10,000 hectolitres of water in twenty-four hours, should be about four horses; consequently, it will consume 4.8 hectolitres of coal per day. Third, the cost of a reservoir, and that of the pipes which establish its communications with the engine and condenser. Fourth, the construction of channels or trenches for leading off the waste-water.

In sugar factories where the water for condensation cannot be procured (and they are the greatest number), the Howard apparatus cannot possibly be used. It would be vain to attempt to cool the tepid water at small expense, either by causing it to circulate in open trenches, or in any other manner; the volume to be cooled daily, when it is necessary to lower its temperature to 15°, is enormous. Consequently, the establishment of means of refrigeration would cost too much. In 1835, MM. Roth and Bayret, attempted to cool the water injected into their condenser artificially; and, although they had great interest in succeeding, and did not lack money—while the means they resorted to were well conceived and executed—they were obliged to give up the experiment, after many fruitless attempts.

Having now fixed the basis of the comparative calculation which we wished to make, between the apparatus of Dégrand and that of Howard, as to their respective economy, we will complete the calculation:

An apparatus of Howard, in its normal condition, to work 290 hectolitres per day, costs		12,500 fr.
Its engine, air pumps and pipes,		6,500
Add to this the other expenses which are incurred by the Howard apparatus, in sugar factories, which have no water-course at their disposal, viz:		
Boilers requiring 27,000 kil. of steam per day, or 1,125 kil. per hour, estimated at	7,500 fr.	16,000
Their furnace and chimney, estimated at	1,500	
Boring one or more wells, Reservoir, Engine for raising water, Trenches for waste-water, estimated at	7,000	
Total,		35,000 fr.

This is, approximatively, the first outlay which is required by an apparatus of Howard, in its normal condition.

We have shown, page 116, that the one which MM. Derosne and Cail offer to purchasers, does not satisfy these conditions; the price, however, is the same.

Suppose this apparatus lasts fifteen years. At the end of that period, the outlay of 35,000f., bearing an interest of 5 per cent. accumulating year after year, becomes 72,760f.

The accumulation of interest is rigorously required in the present calculation, for the simple reason that capital never lies unproductive in the safes or pocketbooks of merchants, and that interest becomes capital in their hands from year to year, and, in certain operations, from month to month. In fact there is no difference between interest acquired and capital; neither is there any between capital expended and interest lost.

In working with the Howard apparatus, of which we have just estimated the first cost, the expense it incurs for each crop is as follows:

The daily evaporation of 27,000 kil. of water, by the aid of the usual generators, which produces 5.5 kil. of steam per kil. of coal, consumes of coal 4,909 kil., or	61.3 hect.
The cold water pump uses	4.8
And the air pumps use	5.4
Total,	71.5
Of which the cost, at a mean price of 1 f. 75c., per hectolitre, delivered at the factory, amounts to 125f. Reckoning the crop to last for one hundred and fourteen days of actual work, the cost of the coal is	14,250 fr.
The firemen's wages, about	450
The maintenance and repairs of all the details of the apparatus, its boilers and their furnace, amounts annually to	1,000
Total,	15,700 fr.
This expense, which is incurred at each crop, during fifteen successive crops, represents at the end of the fifteenth, adding the accumulated 5 per cent. interest, a capital of	338.850 fr.
At the end of the fifteenth crop, the first cost represents a capital of	72.760
Total,	411,610 fr.
In the hypothesis which serves for the basis of the present calculation, the apparatus is past use at the end of fifteen years. It is then sold as old machinery, for, say	3,000 fr.
Consequently the whole cost is	408,610 fr.

For evaporating and concentrating, day by day, with an apparatus of Howard. 290 hectolitres of juice and molasses, during fifteen campaigns of one hundred and fourteen days of actual work, which amounts, upon the whole, to working upon a volume of 495,900 hectolitres.

This juice may be more or less aqueous, depending upon the soil, the seasons, and the proportion of water added in the raspage. If we suppose, that on an average, 9 kil. of sugar per hectolitre of juice has been produced, the weight of sugar obtained in fifteen crops has been 44,631 metrical quintals. Dividing among this number of quintals, the sum 408,610f., paying attention to the compound interest, in the ratio of five per cent. per annum, it is found that the expenses attendant upon evaporation amount to about 6f., 36c., per 100 kil. of sugar of each crop, proportionally to the production.

The expenses attendant upon evaporation, with the *vicious* apparatus which MM. Derosne and Cail deliver to their purchasers, by modifying the Howard apparatus with their improvements, necessarily amount to a tax much greater than 6f., 36c., per 100 kil. of sugar, because this apparatus not fulfilling the normal conditions of reducing the temperatures of heating and ebullition, gives a smaller yield in sugar.

We cause the word *vicious* to be printed in italics, in order to indicate that it is not written carelessly. The following is proof of it: we extract it from a memoir published by the constructors themselves—a memoir cited in the margin of the seventh part of the fourteenth volume of the *Publication Industrielle*, page 295, by M. Armengand, Sr., which has appeared within the last twenty days. "We have observed," say MM. Derosne and Cail, in their memoir, "that in the evaporation of juice to 25°, the degree of vacuum was sufficient when the mercury maintained itself in the barometer at a depression of 40 to 45 centimeters; in the work of the second operation, that from 25° to the proper state of consistence, the vacuum should be maintained at between 48 and 60 centimeters of depression."

The pressure of the atmosphere being measured by a barometric column of 76 centimeters, it must be understood here, by a depression of 40 to 45 centimeters, that the saccharine liquid is submitted to a pressure of 36 to 31 centimeters in the first evaporation, and to a pressure of 28 to 16 centimeters in the second. From the natural relation which exists between the elastic force of saturated steam and its temperature, the pressures of 36 to 31 centimeters correspond to temperatures of 81° to 77°, and the pressures of 28 to 16 centimeters to temperatures of 75° to 62°.

On the contrary, the observations of Howard, show that there is a difference of 12° between the temperature of the boiling syrup and that of the steam which this syrup emits in a partial vacuum.[*] Consequently, the precipitate assertion of MM. Derosne and Cail means, that they have observed that in the evaporation of juice, the temperature of saccharine liquids was sufficiently depressed when it did not surpass 81+12, that is to say 93°; and that in the subsequent labor, in passing from evaporation to concentration, the temperature of the saccharine liquid was sufficiently depressed, when it did not surpass 75+12, that is to say, 87°.

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[*] On page 305 of the *Publication Industrielle*, previously cited, MM. Derosne and Cail give a small table of ratios between the temperature of steam and its tension; and after this table they say that the temperature of steam is the same as that of the liquid from which it arises. This erroneous assertion causes manufacturers and sugar refiners to think it unnecessary to introduce a thermometer into the close pan of the vacuum apparatus showing the temperature of the syrup, and a manometer in immediate connection with the pressure of the steam in the dome of the boiler.

The possession of the most elementary knowledge of physics suffices to show, that substances in solution always elevate the boiling point of water; as, for example, a saturated solution of sub-carbonate of potassa boils at 140°, while the steam freed by this ebullition is at 101°. Besides, it suffices to have taken the temperature of a boiling syrup at the point of concentration, and that of the steam which escapes from it, to know that the syrup boils at 112° or 114°, in giving off steam at 105°.

However, in the London refineries, which produce sugar perfectly pure, and of the most beautiful crystalization, for a maximum yield of brown sugar, the pressure upon the syrup is at most 9 centimeters; and this pressure falls to 4 toward the end of the condensation. Besides, in the Howard apparatus, constructed by M. Louvrier & Son, the pressure upon the syrup falls to 9,5 centim.; as it appears by a note he furnishes to the *Publication Industrielle*, quoted at the bottom of page 290 of the number before referred to. It is then obvious, that the degree of vacuum which MM. Derosne and Cail declare that they have observed to be sufficient, is far from the truth; and their assertion, which depends neither upon experiments nor theoretical deductions, has no other effect than that of leading into error persons who may admit it as true.

And it is not only by elevating the temperature of the ebullition of syrup to a very high degree, that they transgress the natural laws which govern the evaporation of saccharine liquids; but also in elevating beyond measure the temperature of the steam which heats the syrup; they carry this steam to 150°, while in the English refineries referred to, it carried only to 104° or 107°.

Thus, when MM. Derosne and Cail say that they have improved the Howard apparatus, it must be understood that, in the apparatus with injected water which they construct, the syrup in ebullition is at 93° or 87°, when it should not exceed 63°, and that it is heated by 150°, when the stream should not exceed 104° or 107°. Hence, there results necessarily, that the purchasers of the Howard apparatus, such as MM. Derosne and Cail deliver them, realize neither the beauty, nor the quality, nor the quantity of sugar, which the sugar refiners of London obtain with the Howard apparatus which they buy in London.

In order to induce manufacturers and refiners to buy the apparatus which he constructs, M. Cail says to them: "That the water-injecting apparatus is the monarch of its kind; that it is an established affair." There is in this assertion an artifice of language which results from the confusion which M. Cail established between the Howard apparatus for the use of English refineries, and the same apparatus said to be perfected by himself. At first glance, these two machines have some resemblance, because they are both vacuum apparatus, with fixtures for the injection of water, but they differ essentially in point of manufacturing effect. Consequently, what English refiners may say in favor of the apparatus, their use is in nowise applicable to the awkward imitation of that of Derosne and Cail.

There is besides a concealment in their assertion, respecting the application of the apparatus, with the water-injection, to the manufacture of sugar; they deceive manufacturers in the first outlay in the working of this apparatus, and the influence of its consumption of fuel. We will demonstrate this fact, not by means of words of several meanings, but with figures, the only unanswerable argument in questions of this nature.

(To be concluded in our next.)

ART. III.—USURY LAWS AND THE VALUE OF MONEY.

He who traces the history of the laws, on the subject of *interest*, or the profits of capital unconnected with labor, will not rise from the study disposed to exclaim, with Hamlet, "What a piece of work is man! how noble in reason! how infinite in faculties! in apprehension, how like a God!" but will rather be disposed to exclaim, with the cynical philosopher of Ferney, "Pedagogue in phrases! furred reasoner! thou inquirest after the limits of the human mind: they are at the end of thy nose." Lawyers know—for all lawyers have read Blackstone—that "in former times, many good and learned men very much perplexed themselves, and other people, by raising doubts in *foro conscientiæ*, about the legality of exacting a reward for the loan of money." They held, that any *interest*, high or low, was alike indefensibly usurious; and proceeded to justify their opinion by those stately absurdities of ratiocination, that were "part and parcel" of their age.

They insisted, "imprimis," that the law of Moses prohibited the taking of interest among the Jews, without adverting to the fact, that it was confined to the trade of Jew with Jew, and that, in their intercourse with strangers, they were expressly permitted to loan on *usury*, which, in past times, meant nothing more than *interest*, or a remuneration for the *use* of money. "Untó a *stranger*," Moses says, "thou mayest lend upon usury, but unto thy brother thou shalt not lend upon usury: that the Lord thy God may bless thee in all that thou settest thy hand to, in the land whither thou goest to possess it." While, therefore, the Christian Antonios (generous souls, though foolish) were reaping "golden opinions, from all sorts of people," by "lending money, gratis," the more sensible Shylocks of the tribe of Isreal, reaped more *exchangeable profits*, by a better understanding of the words of their law-giver. It is a singular circumstance, that Christians should have overlooked the fact, that the Jews, themselves, put a different construction upon the law, and adopted a different *practice* in regard to the loan of money. But it is still more surprising, that these learned Christians should have overlooked the parable of the *talents*, in the twenty-fifth chapter of Matthew, in which the servant who did not put his *talent* out, "to the exchangers," in order to "receive it" back "with usury," was punished, by having it taken from him and given to the one who had made *cent.* per *cent.*, by the loan of his.

These learned reasoners upon the propriety of taking interest, likewise hooked up, out of the crude mass of ancient learning, a dictum of Aristotle, "that money is naturally barren, and to make it breed money is preposterous and a perversion of the end of its institution, which was only to serve the purposes of exchange, and not of profit;" and, in consequence of this train of logic, Mr. Blackstone tells us, that "the school divines branded the practice of taking *interest*, as being contrary to divine law, both natural and revealed; and the common law proscribed the taking any—the least—interest for the loan of money as a mortal sin." Modern "usury laws," are but an *offspring* of these old opinions (idiot child of idiot mother); for, although the practical maxim of our day, that "money makes money," is the reverse of Aristotle's, our legislators, still regarding that old prejudice, which hangs like a cobweb around the brains of men, have but, *in part*, eradicated the absurdities of the past.

Our laws, it is true, allow us to take *some* interest, but deny us the privilege of taking the full, natural, market value of the use of money. They make a sort of Procrustes bed for the profit of capital, and cut it off when it goes beyond the limit, and in a measure tend to *stretch it out*, when it would naturally fall below. In the sale, or hire, of every other commodity, we are permitted to exact its full value, and would be thought very foolish not to do so. What reason, then, exists in the case of *loans*, for a departure from this general law of domestic free trade, in permitting every article to command its natural, market price—to rise and fall, according to the supply and the demand? There must be some reason for it.

Let us, then, inquire what were the objects which the framers of modern usury laws had in view; what are the actual consequences of those laws; what would result from their repeal; and whether they are consonant with justice and the general freedom of our institutions.

I can recall but two reasons for the passage of usury laws: first, the establishment of a uniform measure for the value of money for a given time; secondly, the protection of the borrower against the oppression of the lender.

In regard to the first object, it may be asked, how is it possible to establish a fixed value for that which is constantly changing? How vain the attempt, to render stable that which is as unstable as water! Money, like every other commodity, has its fluctuations in value, its ebb and flood, according to the supply and the demand for it, and according to the opportunities of its profitable investment. Adam Smith assures us (and no sane mind can refuse its assent to the proposition) that "it may be laid down as a maxim, that whenever a great deal may be made by the use of money, a great deal will commonly be given for it." And is it not preposterous to enact, that no *more* shall be given for it, when much may be made by its use, than when very little can be made? He who makes much, can afford to give much; and he who makes little, can only give little. It is vain and ridiculous, therefore, for legislators to offer us their uniform measure of value, and to attempt to render that certain, quod non certum reddi potest. If they could create a sliding scale of interest, to follow the fluctuations of the market, it would be very well, but the effort has not been made, and is, I suppose, impracticable.

But let us inquire, if the second and chief object of the law be attained?—for if there be *one* good reason for it, it should not be expunged from the statute book. Do usury laws avert, or *tend* to avert, that oppression which the lender has it in his power to inflict, and does, so often, inflict upon the borrower? If the law can be *evaded*, so that the violator of its provisions cannot, by legal process, be subjected to its penalties, then, as a matter of course, the law fails of its object. But waiving, for a moment, the consideration of this question, and proceeding upon the hypothesis, that its penalty is *inevitable*—is it probable, that money-seekers could find any one so careless of his interest, as to lend them money at the *legal* rate, when that rate is far below the actual value of the forbearance of money? In such case, would not capital seek investment in the various profitable branches of industry, or in the banks, insurance, or other joint-stock companies? For money is only worth more than the legal rate, because it can be more advantageously employed; and it would, therefore, be very unreasonable to assume, that money-lenders, with all their known astuteness, would loan at six per cent., when, by investments in the joint-stock companies, they could make from ten to twenty per cent., with equal security for the principal; and by employment in mercantile pursuits, with an increase of hazard, it is true, they could make still greater gains. Borrowers seek the loan, for the purpose of making these greater profits, and when those profits exceed very much a proper remuneration for the skill and labor of the borrower, after deducting the interest which he pays, monied men will keep their capital in their own hands, employ it on their own account, and reap, for themselves, these large profits; whereas, if they had been paid a full remuneration, they would have loaned their money, and permitted borrowers to make the profit, properly due to the skill and labor expended in the employment of the money loaned. But capitalists are not driven to this alternative. No statute, on this subject, has yet been made which the wit of man has not eluded. None have presented any serious obstacle to loans at a rate higher than the legal rate. They may be all easily evaded, and are evaded every day; and thus the law is daily brought into contempt through its inefficiency. If it be efficient at all, it is against the simple and weak-minded, who hardly know of its existence, or were too foolish, or too careless, to take the means of evading it; while the more cunning violators of its provisions, securely laugh at its penalties. There are a few cases in which the law is operative, and in these cases, by a singular legislative anomaly, it operates to *oppress* those who, by the general theory of the law, are peculiarly entitled to its favor. Where there is money in the hands of an administrator, or executor, or a guardian, or curator, for the benefit of distributees, legatees, lunatics and infants, and there is an order that it be loaned, it must be loaned at legal rates and thus, this class are made to lose the excess of the real, over the legal, interest of money.

The customary mode of evading the law, is for the borrower to make his negotiable promissory note payable to the order of some third person, who indorses it and sells it, at a discount greater than the legal interest, to the lender. The lender, to make himself doubly secure, takes a deed of trust, to secure its payment, and negotiates the note to some innocent party, in whose hands it is morally and legally unassailable. Since, then, each *reason* for its enactment fails, the law should be abolished, in accordance with the spirit of the old maxim—*cessante ratione cessat et ipse lex*—even if nothing more could be urged in favor of its repeal If it be demonstrated, that it is practically inoperative—that it fails to attain its object—it should be discarded as a *useless* thing. It is public printing and paper wasted

But it is only *inoperative* for *good*, while it is positively productive of evil It increases the rate of interest, which it is its object to restrain within narrow bounds. It tends to strengthen, to support, and to keep alive, the common prejudice against those who exact an interest, called exhorbitant, *because* it is ultra-legal. The law, however absurd it may be, is made by men, who, coming from the midst of the people, reflect their passions, prejudices, and sentiments; and the individual weight of authority of these legislators (who, as they are, or ought to be, elected for their intelligence and integrity, have great authority with their constituents), added to the common respect for law itself, exerts a strong, retro-acting influence upon the people, and tends to strengthen and confirm the odium and aversion, in which they have been educated to regard the money *shaver*. In consequence, then, of this odium, reanimated by legislation, many men who entertain it, and more who lack the firmness to brave it, prefer employing their money on their own account, and will not loan it. It thus diminishes the *quantity* of money to be loaned, and, as it does not ratably diminish the demand, it follows, as a necessary consequence, the supply being diminished, and the demand remaining the same, or nearly so, that the price must be enhanced. As to the commonwealth, she neither loses nor gains much by these changes. It may be said, that by stimulating the borrower to greater exertions, in order to make his fair profits, and likewise to pay the exhorbitant interest, the value of the productive industry of the state is somewhat enhanced. But upon the other hand, it may be urged that money-lenders are generally those, who, from sex, education, absence from profitable markets, or other causes, are unable to employ their capital as advantageously as those to whom they would lend; and that, by forcing them into the channels of trade (as we have seen they are forced by common prejudice, or their defect of fortitude to brave it), the community loses that *excess* of profit, which the borrower, by his skill in the more profitable branches of industry, and by his better knowledge of men and things, and the market, could make over the lender.

Again—it may be urged that the community loses, in a moral point of view, by tempting men to postpone the payment of their debts. If money be worth much more than the legal rate of interest, it is to the interest of the debtor to deceive his creditor, to put him off, to disappoint him, to drive him into courts of justice, and to inflict upon him the "law's delays," and all the swarming ills of litigation. This, certainly, debases men's morals, if it does not strike a blow at prosperous trade itself, by impairing that *confidence* among men which is the great fly-wheel and regulator in the commercial machine. This is no imaginary evil: it is real, and of frequent occurrence. Many men now permit themselves to be sued, because, during all the delay of the law, they have the use of their creditor's money, at the legal rate, when, in fact, it is worth much more. In this way, *some* have retrieved very desperate circumstances, and this is the only good which I have ever known to come of it.

It has been urged, that usury laws increase the rate of interest, by forcing the lender to incur the risk of the statutory penalty: but to this, it has been very properly replied, that there was no risk at all—it being perfectly easy to evade the penalty; and there being no risk, of course, there can be no charge for it.

There seems to me, however, to be one exception—in the case of small dealers, who cannot give such security as to make their notes readily negotiable. It may be remarked, too, that this class are, generally, the young and enterprising poor men of the land, who deserve the encouragement of the legislature as much, certainly, if not more, than any other class of the community. Their negotiable notes, not possessing the credit of the rich man's, and not secured by deed of trust, cannot be negotiated, and remain in the hand of the first taker, who, being *cognizant* of the usury, is amenable to the penalty of the law, even in the case of a negotiable note. Were he able to pass it to a third party, who gives full consideration for it, without notice of the original usury, it could not be impeached. Hence, in the case of a poor man, they do frequently charge an extra compensation, in consideration of the risk which they run of incurring the penalty of the statute—a risk not incurred, and which, of course, cannot be brought into the account of charges, in the case of a wealthy borrower. Poor men likewise suffer, from the fact, that the law drives from the ranks of money-lenders, those good men who have scruples themselves, or respect the scruples of others, against violating it, while it leaves there only the grinding usurer, who will not hesitate to take advantage of the necessities of the poor, and exact from them a remuneration greater than the fair price for the loan of money. There must, of course, be a difference, at all times, between the rate at which money may be borrowed by a rich and a poor man. A poor man, who is unable to give as good security, must, and ought to pay more ; but I think the usury laws tend to render the disparity greater than it would be naturally.

My article is already extended beyond what I had intended, and I don't know that there is anything original in it, of any merit. I must, therefore, bring it to a close.

The repeal of the law, would, of course, correct all the evils that have followed in its train. The support being taken away, the superstructure must fall.

The law appears to me inconsistent with natural justice, and to the right of every man to pursue, with perfect freedom, any avocation not noisome to the community. Most political economists have thought it pernicious to establish a legal, below the *real*, rate of interest, and have so written. But legislators, having eyes, would not see; or seeing, would not believe. They interpose between two persons about to strike a bargain, which they think mutually beneficial, and say to the lender, "Out! barefaced extortioner; do you not know that 'money is barren' (to a certain extent), and cannot procreate (beyond the limit); and that you are an enemy to your kind, in attempting to augment its vigor?"—and to the borrower, "Poor dupe! you were nearly ruined; we will take you under the protection of our wing, and prevent the consummation of so iniquitous a bargain." The borrower expostulates, but the wise *parentes patriæ* will not relent.

Oh! wise legislators! *filioli* of Aristotle, begotten in an *insane interval*, pardon a benighted wight who refuses to accord to your supervising wisdom a capacity, to take care of men's interest, greater than they themselves possess, in each individual case! Men were, aforetime, in need of a guardian ; but now they are enfranchised and can take care of themselves. Or most learned law-makers, if you place your law upon the basis of morality, or religion, pardon me again, I beseech you, for believing that the patriot, Brutus, who took forty-eight per cent. interest, at Cyprus—that Moses, who permitted usury among his people—that Christ, who rewarded those who made *centum per centum*, for the talents given them, was each not inferior to you—transcendental refiners in ethics, though you be! The maxim, *via trita via tuta*, ought to be restrained by one equally true, *malus usus est abolendus.*

ART. IV.—SOUTHERN AND WESTERN MANUFACTURES.

RELATIVE COST OF STEAM AND WATER POWER FOR MANUFACTURING PURPOSES.

We call attention to this instructive and valuable paper, promising to continue the subject hereafter. The author is a practical man, and his views have been fully indorsed in the highest quarters. The question of our ability to compete with the East in the manufacture of cottons, turns very much upon the proposition here discussed. If steam power *here*, is cheaper and better than water power *there*, it must at once be admitted, the chief seat of cotton manufacture will, eventually, be over and near our central coal fields.—EDITOR.

WHILE we discuss this subject, let it be borne in mind, that water power, like all other things which exist in fixed quantities, must ever be circumscribed within the limits prescribed by the Creator. Hence, each quantum of water power, applied to practical purposes, reduces by so much the quantity to be appropriated. The consequence is, as one mill site is occupied after another, water power is increased in its market value, because, unlike articles which are the production of human art, and industrial efforts, the quantity cannot be increased with the increased demand. With steam power, where fuel is abundant, the case is precisely the reverse.

Steam engines, of any given power, may always be had to order, at any designated spot. No matter how rapidly you may multiply them, the supply will equal the demand. The materials for their construction cannot be exhausted, and human art and labor will ever be adequate to our wants. Under these circumstances alone, steam power would not be likely to increase in cost. But there is another very important consideration to be taken into the account. The steam engine undergoes continual improvement. The modifications of its form and structure, have for their objects perfection in action and economy in fuel. Vast strides have already been made in this work of improvement. This perfection is still increasing, and no one can predict, with certainty, how much more will yet be done, nor in how short a space of time, toward perfecting that useful and truly wonderful invention. All such improvements serve to reduce the cost of steam power, by reducing the quantity of fuel and labor necessary to a given result, while, at the same time, they increase its productive value, by rendering the steam engine more simple, more durable and efficient, as well as reducing its cost. Thus, all these causes combined, very much diminish the cost of steam power, while that of water power has increased; and the causes which have produced these results thus far, will still continue to operate. These facts are now beginning to be understood. Hence, steam power is gradually taking the place of water power.

To operate large manufactories, or other extensive works, to advantage, the motive power must be, not only ample, but also infallible; and, therefore, it becomes necessary to place them, if to be driven by water power, on streams having a great volume of water, with a rapid current and a great fall. Of such streams, there are very few in the west—the best, perhaps, being at Beaver, Pennsylvania, and at the Muscle Shoals, Tennessee. Most of the rivers on the eastern slope of the Alleghanies, are short and comparatively dry in summer. Even in New England, many corporations have found it necessary to purchase lands, and to construct reservoirs on them to contain water, to drive their mills in dry seasons, and which has been done at a heavy expense. The eastern mountains and hills are so steep, that the water passes rapidly from them to the sea; and, in the spring of the year, when the snow melts and the ice breaks up, and heavy rains fall, the force of the flood sweeps before it all ordinary obstructions. To withstand this almost resistless force, dams and locks must be of great strength, and consequently of great cost. The mills are, also, if practicable, placed at a distance from the river banks, and the water conveyed to them through canals. The falls, too, are on rocky formations, and, in general, at the gorges of hills—and which makes excavations, for canals, roads, sites for buildings, &c , &c., very expensive. The operations of mills, situated near the tide water, are frequently suspended by means of the floods or freshets above spoken of. Probably, Lowell is more nearly exempt from this difficulty, than Dover, New Market, Salmon Falls, and many other manufacturing places in New England; yet, Mr. Miles, in his history of Lowell, says, eighteen of the twenty-seven cotton mills in the city are situated on the river side, and once or twice each year are obliged to suspend part of their works, sometimes for days together, in consequence of back water. Occasionally, the ice carries the dam away, or breaks the water-wheel. In such cases, the pay of the operatives goes on, or a higher price is, for a time, put on the work. To estimate the loss, per diem, resulting to a company from suspension of its works, I give some of the statistics of the Merrimack Mill. This mill has a capital of $2,000,000, and employs 1,737 operatives, at a cost of, say, $240,000 per annum. Interest on the capital, $120,000; making $360,000 per annum, or nearly $1,000 per diem, would be the loss, by the suspension of a single day, aside from the inconvenience. Again, the water-wheels must not be exposed to the frost, but inclosed in masonry—often in excavations in solid rock. Mills, driven by steam, are subject to none of these casualties, nor to the losses and expenses originating in them. Water power may be purchased, in other parts of New England, at a rate, nominally, cheaper than at Lowell; yet, taking all the local advantages into the account, it is, in reality, as cheap there as at any other place. The present cost of water power, at Lowell, is at the rate of five dollars per spindle. Nearly all the waterfalls in New England, are at considerable distances above the head of navigation; and the estimate is within the truth, when I give the distance from Boston to Lowell (twenty-six miles) as the average distance of the New England factory, from the point where its cotton is landed, and the depot of its goods; both of which are transported, either on rail roads or in waggons. From Boston to Lowell, the cost of transportation is $1.25, and $1.10, per ton. But, according to Doggett's Rail-road Register, the average cost on cotton and dry goods, between Boston and sixteen of the most important manufacturing towns that receive cotton through that city, and send their goods to it for sale, is $2.75 per ton. This is about the average price of such freight, per steamboat, between Louisville and points three hundred miles distant from that city. If, as will be shown hereafter, a very large portion of this heavy expenditure for land transportation can be avoided, by the use of steam as a motive power, the advantages will become self-evident. The amount of this expenditure is nearly as follows: A cotton mill, of 10,000 spindles, will turn off two and a half tons, per day, of cloth No. 14—say seven hundred and fifty tons per annum. One hundred pounds of cotton, will make eighty-nine of cloth; hence, seven hundred and fifty tons of cloth, will require for its manufacture about eight hundred and forty tons of cotton. This quantity of cloth and cotton, say about sixteen hundred tons in all, will cost, for transportation, $4,320, at $2,75 per ton, to say nothing of drayage, no inconsiderable item of itself. Besides these, is also the transportation of other heavy articles such as oil, starch, iron to replace broken and worn out machinery, coal to heat the mill, &c., &c., all in very considerable quantities and adding much to the cost.

The foregoing are some of the difficulties and drawbacks, though not all, connected with, or growing out of, the use of water power; and we will now proceed to state, on the other hand, some of the advantages derived from the use of steam power. On this subject, we will cite the results of practical operations, of very recent date, and state facts in which there can be no mistake.

The Naumkeag steam cotton mill, at Salem, Massachusetts, is a new establishment, containing about 31,000 spindles. It is the largest cotton mill in America, and the largest in the world in which the entire process of converting cotton into cloth is carried on under one roof. This mill was put into full operation in the month of January, 1847. The following is an abstract from the annual report, made to the President and directors of the corporation, under date of January 19, 1848:

"In the former annual report, the estimated cost of steam, to drive the machinery and to heat the mill, offices, &c., was $11,420 per annum, including cost of oil, engineer, and firemen. Subsequently, in the actual working of the engine and machinery, experience has afforded satisfactory proof, that the sum stated will be amply sufficient to cover the entire cost. After having run the engine and machinery a sufficient length of time to become certain that there was no mistake in the foregoing statement, it was determined to make an experiment, to ascertain precisely the amount of fuel consumed per day. Accordingly, on Tuesday (yesterday), the 18th instant, with all the machinery at work, the trial was made, and the engine and machinery were driven, during all the working hours of the day, at full speed, with four tons and forty pounds of coal. It was deemed hardly possible, were not the fact placed absolutely beyond a doubt, that so large a quantity of machinery could be driven, for so long a time, by an amount of fuel so small. During this experiment, four of the six boilers were used to generate steam for the engine, and the other two to warm the mill, offices, &c. By the latter experiment, it was found, that two and a quarter tons of coal was sufficient to generate steam, to warm the various appartments, and to supply the 'machine shop.' (What is here termed 'machine shop,' is the repair shop, which, during the experiment, was supplied with STEAM POWER, from the two boilers.) Hence, six and a quarter tons of coal will be found sufficient, per day, for all purposes for which steam is required. The four tons and forty pounds is an offset against water power; as the water mill requires to be warmed as well as the steam mill."

The Naumkeag mill has been in constant operation since the above report was made, and has fully corroborated the fact elicited by the experiment alluded to. We duduce from it, and from other data contained in that report, and, also, from other sources, the following statements and comparisons:

1st. Something less than 1,220 tons of coal, per annum, is sufficient to drive a mill of 31,000 spindles, on yarn of the fineness of No. 30.

This, at the present price in New England, $5 per ton, will cost	$6,100
Wages of engineer (720), and two firemen (600), per annum, ...	1,320
And oil, ...	600
	$8,020 per annum.

The water power at Lowell, for 30,000 spindles, would cost, at $5 per spindle, $150,000. Interest on that sum, at six per cent., would be $9,000 per annum—or $980 per annum more than the cost of steam power, to drive the Naumkeag mill. In addition to the cost of the water power is, also, that of foundations for a mill on the river bank. The cost of flumes, raceways, wheel-pits, water-weels, gearing, &c., necessary to the water mill, we offset against the cost of steam engine; the first cost of the former, as well as that of perpetuating them, is greater than of the later. The actual cost of foundations, however, on the river bank, for a mill of the capacity of the Naumkeag mill, would be, at least, $25,000 more than that for a steam mill, of the same size, on a spot favorable to the purpose. The annual interest, on this difference, would be $15,00, and which makes up a balance of more than $2,500 in favor of steam power. And to this is to be added, the cost of transportation, provided the steam mill be located in the immediate vicinity of navigable waters.

We have said a mill of 10,000 spindles would manufacture 750 tons of cloth per annum, and to do it, work up 840 tons of cotton; of course a mill with 30,000 spindles would work up 2,520 tons of cotton, and turn off 2,250 tons of cloth, No. 14. To a mill at Lowell, this cotton must be transported by land *from* Boston, and from the mill the cloth must be returned TO Boston. Here, then, is railroad transportation of 4,770 tons per annum, which, at $1,25 per ton, the established rate produces the sum of $5,962, and which, added to the foregoing items of cost of water, and its incidental expenses, would make an aggregate of some $11,000—and leave a balance of nearly $4,000 in favor of steam power. Besides this, as before stated, the transportation of articles such as oil, starch, iron, &c., is a heavy item—its gross amount would not be less than 200 tons per annum, which, at $1.25 per ton, would cost $250, and of coal for heating the mill, say 400 tons, the quantity used at the Naumkeag mill, would be $500, making in all $750.

Steam power is much better calculated for the manufacture of cotton goods than water power. Steam power is created by art, and as long as the articles of fuel and water are at hand on any desired spot, that power can be perpetuated. Water power, on the contrary, is a natural production, and can be had only where nature has placed it, and then its supply and perpetuity depend altogether on causes over which, as a general rule, human art can exercise little or no control. Water power must be taken as it is, and where it is. Its quantity cannot, by human art be increased, nor can its location be changed. The consequences are, the amount of operations by water power must have its *maximum*, beyond which you cannot go. Steam power is indefinite—perhaps we might say, infinite, in its capacity for extension; and may go on to increase as long as human art and industry shall continue—"as long as wood grows, or water runs." In all cases where water power is to be used, you must go to it with your buildings, machinery, raw material, labor. and whatever else is required, however great the inconvenience may be, and however heavy the expense. On the other hand, if you determine to employ steam power, you can select your spot, where all you require is either at hand, or can be had at the smallest expense; and, having completed your arrangements, you call the steam power, which comes at your bidding, seats itself on a few scores of square feet, which you have allotted to it, and there continues during your pleasure, acting in obedience to your will, and increasing or diminishing as you may desire.

Steam power is much better adapted to the manufacture of cotton goods than water power, in respect to their quality, and, consequently, to their market value and ready sales. That description of goods is best, and commands the highest prices and most ready sale, which presents the smoothest surface, and the most firm and even texture. That description of cloth is decidedly the best. To produce this superiority, the quality of the raw material being equal to that of others, a certain degree of temperature and humidity of the atmosphere is indispensable in the manufacturing departments. In addition to this, there is also required a moving power, equable and uniform, and at all times perfectly under control. The temperature of a water mill may be partially regulated by means of a dry heat, so called, from stoves or furnaces; but not the humidity of the atmosphere: this is to be done only by the use of steam. A water mill, it is true, may be furnished with a steam apparatus to produce this effect, but it must be at a heavy additional expense, which would neutralize its benefits; while the steam mill already has the apparatus, which will warm and dry or moisten the atmosphere of the mill at a trifling cost.

Besides this, it is impossible to insure with water power, that equable and uniform motion, so essential to manufacturing purposes, at all times to be had from a good steam engine.

The foregoing statements and remarks, as far as they relate to the cost of steam and water power, are based on the results of actual experience in New England. Taking into account the facilities for steam power, as well as for most other elements of the manufacturing business, connected with a location on the lower Ohio, where that noble stream intersects the great coal field of Illinois, the difference in manufacturing there by steam, will be found immense in its favor, when compared with operations by means of steam or water power in New England. If,

under all the circumstances, steam can be applied in New England to advantage over water power, what may not be done at the spot above alluded to.

The article of fuel used in New England to generate steam for cotton mills, and for other manufacturing purposes in general, is that species of anthracite coal of Pennsylvania, termed Lackawana. This coal costs the consumer five dollars per ton, at the port of delivery. The quantity of this coal used at the Naumkeag mill, for all purposes, say, to drive the machinery and to heat the mill and offices, &c., during six months in winter, and driving the machinery during the balance of the year, would be 1,875 tons, allowing four and a half tons per day to drive the mill, and two tons per day in winter to warm it, and for all other purposes. At five dollars per ton, this quantity would cost $9,375.

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yard on 4,000,000 yards, would amount to $40,000, which, compared with the manufactory of the East, would be saved per annum. This would be twenty per cent. on a capital of $200,000, to be invested in the business.

The materials required for the erection of buildings exist in great variety and profusion on the very spot alluded to, and labor may be had from 25 to 30 per cent. cheaper than in New England, in consequence of the corresponding cheapness of almost every article of living. On the very borders of the cotton growing regions, on the very brink of one of the noble rivers which constitute the great thoroughfares of the West, and with the great valley of the Mississippi for a market, the location at Cannelton stands unrivaled, as to its facilities for manufacturing, by any spot in the Union, whether we have reference either to communication, transportation, materials, labor, or the sale of the production of the spindle or the loom, or all of them. These remarks, and the statements which accompany them, are well substantiated facts and practical realities. They require no argument to sustain them, for, to any one at all acquainted with the manufacturing business, and with the circumstances named, or who will take the trouble to inquire, they will become self-evident. But, even in the city of Lowell, itself, a steam cotton mill was erected in 1846, with an engine of 190 horse power; and that this enterprise proves a profitable one, would seem to be pretty certain, from the fact that another has been commenced in that city, and is soon to be put in operation, with 10,368 spindles, and with 260 looms, with a capacity for about double that quantity of machinery. If, at Lowell, steam power can be made to compete successfully with water power, what may not be expected of steam power on the lower Ohio!

ART. V.—THE NORTH AND THE SOUTH.[*]

POSITION OF THE SECTIONS ON THE ADOPTION OF THE CONSTITUTION—CHANGES SINCE THEN—DECLINE OF SOUTHERN CITIES—PROPERTY NORTH AND SOUTH—SOUTHERN AGRICULTURE UNFAVORABLE TO GREAT CITIES—AVERAGE WEALTH AND COMFORT NORTH AND SOUTH—AVERAGE PRODUCT OF BREADSTUFFS.

THE progress and prospects of the Northern and Southern sections of this Union involve some of the greatest and gravest questions of the age. Each has a form of civilization peculiar to itself, and to modern times. The confederacy which has been formed by their union has astonished the world by its success: but the world, as well as the two sections themselves, differ very widely as to the causes of this success, and the agency of the two respective systems of society in producing it. This controversy has long been advancing on the country, and now, in consequence of recent events, it has become general. In this part of the country, however, we have had but one side; and, as the subject is one of the first magnitude, I have thought it highly important that it should be well examined. In a commercial institution like this, it is peculiarly proper that the causes of the wealth, and the sources of the commerce, of the country should be well understood.

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[*] The paper which is now presented to our readers was read as an address, by Ellwood Fisher, Esq., to the Mercantile Library Society of Cincinnati. It excited great applause, and has been circulated with enthusiasm. Many thousand copies were printed at the expense of members of Congress. We yield to solicitations from all quarters, to publish it in the Review, that it may be the more widely read and preserved. For the first time the South has had justice done to her out of her own limits. It is our intention to complete hereafter the contrast of the North and the South in many particulars, which Mr. Fisher could not embody. The parallel can be traced further, and the South need not fear the result. The reader, by consulting our back volumes, will see that we have frequently struck into this field, and always in the most liberal spirit.

When the constitution of the United States was adopted, the population of the two sections of the United States was nearly equal—each being not quite two millions of inhabitants, the South including more than half a million of slaves. The territory then occupied by the two, was, perhaps, also nearly equal in extent and fertility. Their commerce was also about the same; the North exporting about $9,800,540 in 1790, and the South $9,200,500.* Even the property held by the two sections was almost exactly the same in amount, being about 400,000 millions in value each, according to an assessment for direct taxes in 1799.* For the first quarter of a century of the present government, up to 1816, the South took the lead of the North in commerce; as at the end of that period the exports of the southern States amounted to about thirty millions of dollars, which was five millions more than the northern. At this time, in 1816, South Carolina and New York were the two greatest exporting States of the Union, South Carolina exporting more than $10,000,000, and New York over $14,000,000.*

According to the assessments made by authority of the Federal government in 1815 for direct taxes, the value of property in the southern States had risen to $859,574,697, the white population being then, according to an average of the census of 1810 and that of 1820, about 2,749,795, or about $312 per head, whilst the property of the northern States amounted to $1,042,782,264,* for 4,326,550 population, or only $240 per head.

Even in manufactures, the South at this period, excelled the North in proportion to the numbers of their population. In 1810, according to the returns of the marshals of the United States, the fabrics of wool, cotton and linen, manufactured in the northern States, amounted to 40,344,274 yards, valued at $21,061,525,* whilst the South fabricated 34,786,497 yards, estimated at $15,771,724.* Thus, after the lapse of the first quarter of a century under our present form of government, the South had surpassed the North in commerce, in manufactures, and in the accumulation of wealth, in proportion to the number of citizens of the respective sections.

Since that period, a great change has occurred. The harbors of Norfolk, of Richmond, of Charleston and Savannah, have been deserted for those of Philadelphia, New York and Boston; and New Orleans is the only southern city that pretends to rival its northern competitors. The grass is growing in the streets of those cities of the South, which originally monopolized our colonial commerce, and maintained their ascendency in the earlier years of the Union. Manufactures and the arts have also gone to take up their abode in the North. Cities have been expanded and multiplied in the same favored region. Railroads and canals have been constructed, and education has delighted there to build her colleges and seminaries.

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* Pitkin.

These phenomena have made a profound impression on reflecting minds throughout the Union, and particularly in the South. By her leading statesmen, these results have been ascribed to the policy pursued by the Federal Government since 1816. It was at this period that the system of direct taxation was finally abandoned, and the whole interest of the public debt, then so much augmented by the war, as well as the increased expenditures of the Government, were made chargeable on the foreign commerce of the country, except the slight income from the public lands. And, as at the close of the war, the principal articles of export, in exchange for which we obtained our foreign goods, consisted of cotton, tobacco and rice, it was held that the new policy was a peculiar burden on the States that produced those staples. In addition to this, the establishment of a bank of the United States, located at the North, with large deposits of government money, and enabled by the confidence of the government to maintain a large circulation, which would naturally be devoted to the promotion of northern commerce, it was thought was also adverse to southern commercial rivalry. These two measures were the work of a republican administration of the government, but they were strenuously opposed by the states-right party. On their passage in Congress, it was declared by John Randolph, one of the most profound and sagacious statesmen Virginia or any other country ever produced, that a revolution in our government had occurred, whose consequences no man could calculate. The result verified this prediction. Our population is now twenty millions, and yet it is thought by all parties, that twenty-five millions of dollars per annum is enough for the support of government in time of peace. Yet sixteen years ago, when our population was but little more than half of what it is now, this government exacted $32,000,000 as duties on our foreign imports, and that too when, in consequence of this heavy burden on our foreign trade, we only imported 64,000,000. The government took half the value of the imports as a tax on foreign trade. This outrage was the cause of South Carolina nullification.

Now the power of the Federal Government over foreign commerce is by the constitution precisely the same as over that among the States. It is a power to regulate only. And the South contended that inasmuch as the imports from abroad were the proceeds chiefly of her staple exports, and were, therefore, to all intents and purposes, the product of her industry and capital, that there was no more *constitutional* right to tax them on arriving in our ports, than to tax the products of the North when shipped to the South.

When, therefore, the statesmen of the South reflect on the great commercial and manufacturing prosperity of their country in the days of direct taxation, and behold now her dilapidated cities and deserted harbors, under the change of system, is it wonderful that they have made the halls of congress eloquent with the ruin and wrong they have suffered? Or it is wonderful that the North, whilst it cannot believe that what has been so conducive to its own prosperity should be detrimental to others, should yet take the South at its word as to its decline and seek for other causes of such a result. This has been done, and negro slavery has, with extraordinary unanimity, been fixed upon as the great and efficient cause of southern decline. And it is now assumed that the South, particularly the older States, is undergoing the process of impoverishment, depopulation and decay. At the North she is continually spoken of, by almost all classes, in terms of mingled condemnation and pity. She is accused of idleness, ignorance, cruelty and pride. She is advised to emancipate her slaves, and emulate the North in enterprise, industry and civilization.

The first object of civilized life is to accumulate wealth, as on that depends improvement in science and the arts and the supply of the multiplied wants of society in that state.

And hence it is, that the South is declared to be falling behind the civilization of the age, and is advised to abandon her peculiar institution in order to avoid the disastrous condition of ignorance and barbarism that awaits her.

Now, in an age like this, of pre-eminent intelligence, with the schoolmasters all abroad—with the universal diffusion of the press and the post, and on a question like this, of the first magnitude and the least complexity, and whilst the people of the two sections are continually traveling amongst each other, and engaged in discussions with one another in stages and steamboats, in cars, in hotels, on the stump, and in congress—it is scarcely credible that a universal mistake prevails as to the facts. Yet, in opposition to the existing opinion on the subject, I maintain that the South is greatly the superior of the North in wealth, in proportion to the number of their *citizens* respectively; and this will appear by a comparison and progress of the white people of the respective sections. The North, and even many in the South, have assumed a decline in manufactures and commerce to be a decline of general prosperity. This is an error. The policy of the Federal Government, and the domestic institutions of the southern States, have indeed been unfavorable to the latter in those pursuits, but the agriculture of the South has maintained and advanced in prosperity beyond that of any other people.

Let us first examine the condition of the white people of the two sections.

The State of Massachusetts, for instance, is generally regarded as one of the most successful and flourishing of the North; and is constantly referred to by the newspapers as a model for all the others, and very frequently as a taunt to the southern. If, however, we compare this favorite of the North, with Maryland, a southern State, of similar territorial extent, and one of the least of the southern States, we shall find the latter to be decidedly superior in wealth in proportion to the number of her citizens. According to the census of 1840, Maryland had a free population of 380,282, and in 1847 her property was assessed at $202,272,650.* Massachusetts, in 1840, had a population of 737,699, and her property now is only $300,000,000. Taking these two assessments as the basis of comparison, and it appears that the average property of a free person in Maryland was $531, whilst in Massachusetts it is now in the palmiest days she has ever seen, only $406 per head—the freeman of Maryland being about 25 per cent. the richer.

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* American Almanac.

The States of New York and Virginia are both of great territorial extent, and not materially unequal in that respect. New York is also regarded, habitually, as one of the grandest products of free institutions; and the present condition of Virginia is continually referred to, as a striking and melancholy result of slavery. Her poverty, her ignorance, her idleness, her decay and her misery, are the threadbare topics of modern political philosophy here and abroad. Let us now consider the facts. Her free population in 1840, according to the census, was 790,810, and her property is now about $600,000,000.* The population of New York in 1840 was 2,428,921, and in 1847 her property is assessed at $632,699,993. The average property of a free person in Virginia is $758: in New York it is only $260, or a little more than one-third.

Virginia, instead of being poor, and in need of the pity of the much poorer population of the North, is perhaps the richest community in the world. The average wealth of the people of Great Britain may be about the same, but it is not near so productive; and I think it demonstrable, that no people on earth live in a condition of greater comfort and enjoyment than those of Virginia. Nor is there any reason to fear a decline in her wealth. According to the census returns of 1840, Virginia, with a free population of less than one-third of that of New York, and a capital something less, produced, from the various branches of her industry, more than half the product of New York; and as the total population of Virginia, slave and free, is only about half of that of New York, it is clear, that after deducting the annual consumption of both, Virginia will have a larger proportional surplus remaining to augment the stock of her permanent property.

If now we examine the relative condition of the new States, the same results are apparent. The States of Kentucky and Ohio lie side by side, and are of similar climate, fertility and extent—the proportion of rich land being, however, less in Kentucky. Their age is also nearly the same, Kentucky having been admitted as a State about eleven years before Ohio. Ohio is considered the most prosperous State in the West, and is continually contrasted with Kentucky for the purpose of illustrating the blighting effects of slavery on the latter. Let us see with what reason.

In 1840, Kentucky had a free population of 597,570, and her property amounts, according to her tax assessment of 1848, to about 272,847,696.† Ohio, in 1840, had a population of 1,519,467, and her assessment last year was 421,067,991.‡ The average value of property belonging to each free person in Kentucky is $456—in Ohio it is only

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* The property of Massachusetts is stated according to recent estimates in her papers. That of Virginia was computed at the amount now assumed in 1834 by Prof. Dew. I have seen no official statement. But if she taxes other property as high as negroes, the total must now far exceed that estimate, as in 1847 she taxed 252,317 adult slaves at $80,741, who are worth about $400,000,000, and taxes her other property, real and personal $354,454, exclusive of merchant's stock, and the Governor's message states there has been an increase of five per cent. in every item of taxation last year.

† Ky. Auditor's Report, 1848.

‡ Ohio Auditor's Report.

$276, or more than one-third less; and as the population of Ohio is now still greater in proportion to that of Kentucky than in 1840, the difference in favor of the latter is still more.

Nothing is more common than the opinion that the price of land in Kentucky is, in consequence of slavery, much lower than in Ohio. I have examined the Auditor's reports of both States, which present in detail the valuation of all their lands. In Kentucky the average value is about seven dollars per acre, in Ohio it is about eleven, and I am very confident that the quality of Ohio land is to that extent superior—as in Kentucky there is a large mountain region, for which Ohio has nothing equivalent. Thus, then, it is manifest that the free people of the slaveholding States—of those States which are uniformly regarded as the victims of property and ruin—are all richer, much richer, than those of the non-slaveholding States, which have been usually considered as the most flourishing members of this Confederacy, and the most prosperous communities the world ever saw. Such at least is the testimony of official documents on the subject—the highest authority that exists. For I have taken nearly all these statements of the property of the several States alluded to, from the assessments made by public officers for the collection of taxes. Of the accuracy of the valuations, it is of course impossible to speak from personal knowledge;—but those of the Ohio and Kentucky are, according to my opportunities of observation, as nearly correct as need be desired. As to the other States the chances of error are perhaps as great on one side as the other.

In the slaveholding States, slaves are of course included in the property. This is sometimes objected to, but I think without reason. The question is, which is the most profitable investment of capital—in land and slaves, as is usual in the slaveholding States—or in land alone, or commerce and manufactures, as in the northern States? And this question is almost universally decided in favor of the latter. In the South, according to its laws, the slave is as available to his owner for the purposes of property, as any other property. The North has held, however, that this peculiar species of property, instead of being profitable to the owner, has been impoverishing and ruinous. And in contradiction to this I have shown that in every community where it exists, there wealth abounds to a far greater extent than in the States from which it was excluded, whatever may be their climate, soil or territory. But even if the assessed value of all the slaves in Kentucky, Virginia and Maryland, were left out of the schedule of their property, the white people of those States would still remain wealthier, on an average, than those of Ohio, New York, and Massachusetts.

By others again it is contended, that in estimating the average wealth of individuals in a community, the slaves ought to be included as persons, and left out as property. This, I think, is also an error, for the reason before stated. Where it is contended that the white man ought to abandon slave property, because it makes him poor, or prevents him from getting rich, it is absurd to assert that he not only has no property in his slave, but that other property belongs equally to him. But if for any other purpose or view of political economy, the slave be included with the freeman in averaging the property of a State, it will even then appear that in the States I have considered, the southern are still wealthier than the northern, counting the slaves as persons and deducting them from the property. So that in no aspect of the question whatever, is there any foundation in fact for the popular delusion that the southern States, or any of them, are either now or heretofore, or likely to be hereafter, inferior to their northern neighbors in wealth—but the reverse.

The triumph of southern enterprise and capital in the accumulation of wealth being established as a fact, demands of us an investigation of its causes—and this, I think, will materially elucidate the character of modern civilization, and particularly that which has been developed in the United States.

The original methods of acquiring wealth, adopted by men on their organization into communities, was by conquest or commerce. Hence, the almost exclusively military character of one great class of the ancient states; which resulted in the universal empire successively of the Assyrian, Persian, Greek and Roman governments; and hence the rise of Tyre and Carthage. Hence, also, in the middle ages, the empire of Charlemagne, and the long protracted efforts of France to conquer England, and England to conquer France—and the wealth of Venice, Genoa and Holland. At a later period, when the arts had made more progress, manufactures were included in the means of creating wealth. The policy of England has combined the three—conquest, commerce and manufactures; and by these she has succeeded in the construction of an empire which, for extent of territory and wealth, has never had a parallel. The policy of England has been dictated by her insular position. This rendered it necessary for her to acquire the empire of the sea, to be secure from invasion by great continental powers, and with the dominion of the sea, it was easy to establish a great colonial empire. The growth of such a great power in commerce, was the strongest possible stimulus to progress in the arts and manufactures; hence, her success in them. But an extraordinary development of commerce and manufactures has always resulted in the concentration of large masses of people in cities, which causes inequality of condition, great depravity of morals, great increase of want and of crime; consequences that are fatal in the first place to liberty in governments, and finally to independence in nations. This tendency has been so obvious and universal among the great States of all ages, as to have caused the belief that communities, like individuals, contain within themselves the seeds of dissolution which must ultimately bring them to the dust.

But whether we consider a State as a moral being, whose essence consists in the principles on which it is constructed, and therefore not necessarily mortal, or whether we regard it as a mere creature of the race or persons that founded or inhabit it, and therefore transient, there can be no doubt that its prosperity is seriously impaired by the evils referred to, that generally attend the progress of civilization.

Rural life has always been celebrated by the poets for its innocence.

"God made the country and man made the town:"

But it is a kind of life that has seldom been thought favorable to the accumulation of wealth—the first want of civilization. It is also usually associated with rudeness of manners. Hence, the votaries of fortune and society have preferred the city; and, if to these we add the vast multitude who seek the immediate gratification of their appetites and passions, which cities afford, at the hazard of future want, we have a clear solution of the undue tendency to city at the expense of country life. This great evil, sufficient of itself to cast a stigma on civilization and even ultimately to destroy it, was for the first time successfully encountered and conquered by the institutions of the South; and in the great achievement Virginia led the way. Amongst the early white settlers of Virginia were many of the Cavaliers who had been driven into exile by the triumph of the Roundheads and of Cromwell. The Cavaliers were of the country party in England, the cities and towns were more generally devoted to the Roundheads. The Cavaliers of Virginia seem to have brought over with them from England a hostility even to the modes of life of the enemies they left behind them, as the settlers of New England, on the other hand, from the Roundheads, became highly commercial. These peculiarities were exhibited in a striking manner in the progress of the two colonies. Bancroft tells us:

> "But the greatest safeguard of liberty in Virginia was the individual freedom of mind, which formed of necessity the character of independent landholders living apart on their plantations. In the age of commercial monopoly Virginia had not one market town—not one place of trade. As to all outward appearance it looked all like a wild desert, and the mercantile world, founding its judgment on the absence of cities, regarded it as 'one of the poorest, miserablest, and worst countries in America.' It did not seek to share actively in the profits of commerce: it had little of the precious metals, and still less of credit—it was satisfied with agriculture. Taxes were paid in tobacco; remittances to Europe were made in tobacco; the revenue of the clergy, and the magistrates and the colony, was collected in the same currency; the colonial tradesman received his pay in straggling parcels of it, and ships from abroad were obliged to be whole months in the rivers, before boats visiting the several plantations on their banks could pick up a cargo. In the season of a commercial revolution, the commercial element did not enter into the character of the colony. Its inhabitants 'daily grew more and more averse to cohabitation.'"

Such was the character of Virginia in 1700—ninety-two years after the colony was founded, and seventy-six before her Independence—such she has remained. I have seen a law passed by her legislature during the revolutionary war, prohibiting merchants from serving as Representatives in the Continental Congress.

But this primitive character of Virginia could not have been preserved to the extent we now behold, but for peculiar circumstances. The soil of Virginia was found to be adapted to the cultivation of tobacco, and African slave labor to its cultivation; and tobacco soon became an article of commerce. The introduction of this sort of labor had the effect of excluding, in a great measure, emigration from Europe—the emigration which subverted the ascendency of the Quakers of Pennsylvania—which has materially modified the original character of New England, and still more of the new free States of the West. And it has been through negro slavery that agriculture has been made, for the first time in the history of the world, so profitable and attractive as to render rural life the favorite of wealth as well as of the mass of the people—to make the country, instead of the towns, the abode of elegant manners and refined taste. And this system of society has prevailed throughout the other States of the South, owing to the similarity of their primitive character to that of Virginia—to her example—to emigration into them of many Virginians—the warmth of the climate, and to the culture of cotton, which is more favorable to the employment of slave labor than that of tobacco.

Thus, then, we have fifteen Southern States—one-half of the number belonging to the Union—occupying half our territory—who present the extraordinary and, so far as my researches extend, the unparalleled result of a population which has acquired greater wealth by agriculture, than any other people in any other manner; and who have consequently given ascendancy within their borders to country life over city, in social and political power. In Great Britain, the only country which can be compared in civilization with ours, the landholders are indeed a very wealthy class, perhaps the most so, but they have dwellings in London, and pass a large part of the year there. The landholders of great Britain also constitute but a small portion of the population.

We must now consider the effect upon the various elements of civilization, of a population at once wealthy and rural like that of the South.

In communities which have acquired great wealth, it is almost universal that such wealth is very unequally distributed. Extreme poverty and extreme wealth characterize the population—but the mass are poor. This is perhaps inevitable where manufactures, or commerce or conquest, are the means of acquisition. And in England this is strikingly displayed. But it is not so in an agricultural people. I know it is a common opinion, that much greater inequality of property exists in the South than in the North. But although I do not possess exact knowledge on this point, there is enough known to prove that this cannot be the case. The State of Virginia allows none to exercise the elective franchise but white freeholders, leaseholders of five years and housekeepers who are heads of families. Now it appears, by the returns of the Presidential election of 1844, that Virginia gave about 95,000 votes; allowing 10,000 for voters who did not attend the polls, and it appears that there are 105,000 free white males in that State who are either freeholders, leaseholders or housekeepers and heads of families, and by the census of 1840 there were only 157,989 white males in that State above the age of twenty-one; so that two-thirds of them are either freeholders, leaseholders, or housekeepers. I do not know what proportion of the Northern States are freeholders, but I have seen a detailed statement, from one of the interior counties of New York, from which it appears that only half the voters were freeholders; and when we consider that the cities of New York and Boston contain nearly half the property of the States to which they respectively belong, and that in those cities pauperism prevails to greater extent than any where else in the Union, it is clear that great inequality of property prevails.

The state of Ohio, a new State and an agricultural one, and very prosperous, may be presumed to enjoy a tolerable equal distribution of property. There are in this State, by the last assessment, about fifty thousand pleasure carriages, and the possession of one of these, is an indication of a comfortable condition of a family. In Virginia there were in 1847, over 19,000; and that in a white population about one-third as great as ours is now. This proves that the degree of comfort which such establishments indicate, is more diffused in Virginia that in Ohio. The proportion of dwellings built in a year, is another indication of comfort, and the degree of its diffusion among a people. According to the returns of the marshals in 1840, Massachusetts, whose white population is nearly the same with that of Virginia, built 324 brick houses in that year. Virginia built 402, or nearly one-fourth more. Massachusetts built 1249 wooden houses the same year, Virginia, 2604, or more than double. The cost of the houses in Massachusetts was $2,767,134; in Virginia, only $1,367,393, or about half. Now if this excess in the cost of the houses of Massachusetts be attributable to the excess of business, or manufacturing structures among them, it swells the proportion of dwellings built in Virginia, and thus displays a still greater progress in comfort among the population of the latter. But if the excess of cost in Massachusetts is owing to the superior style of her dwellings, it proves, since the number is so much less, a still greater inequality of property. A comparison of the houses built in New York the same year with those in Virginia, exhibits similar results. And I will add that the same thing is true, by a comparison between Virginia and Ohio, although one is considered the most declining, the other the most advancing, State in the Union; one supposed to be the most unequal in the distribution of property, the other the reverse. In 1840 Ohio built 970 brick and 2764 wooden houses, at a cost of $3,776,823. Thus, while we had twice the white population, we built only a fourth more of houses. Kentucky, also, as well as Virginia, surpassed Ohio in this respect. Kentucky built 485 brick, and 1757 wooden houses; thus, with only 40 per cent. of Ohio's white population, she built 75 per cent. of the number of houses Ohio did. The fact is that Virginia and Kentucky constructed in that year, more buildings in proportion to their whole population, black and white, than Ohio and Massachusetts. This result does not appear, indeed, in the cities, or in the principal streets of cities, and therefore has not come to the knowledge of fugitive and superficial observers, or newspaper item-mongers, but it is demonstrated by the labors of the officers of government, who were required to visit the country as well as the towns, the bye-ways as well as the highways, and it is triumphant evidence of the extraordinary aggregate prosperity and wide-spread individual comfort of the States which have been selected by the new School of politicians, and political economists, as the objects of their sympathies and the victims of their theories.

The same relative condition of comfort in the two respective sections of the Union, is indicated in their food. Although Virginia is not an exporter of animal food, she is one of the greatest producers of it, of all the States. In 1840 she possessed 1,992,155 hogs, which is almost identically the same number that Ohio had, although Ohio has twice the white population, and, as is well known, is a large exporter of pork, while Virginia imports, in addition to her own stock, every year, a large quantity. New York, with three times the white population, was materially behind Virginia in this respect. Now, it is well known that the great mass of provisions produced in any State, are designed for domestic consumption, as the cost of transporting them to the dwellings of an agricultural people is too great to admit of their importation. Hence, the products of such a people afford a good criterion of the character of their food. The stock of neat cattle in New York was 1,911,244; in Virginia it was 1,024,148, the proportion of Virginia being still the greatest. In sheep alone, was New York better off, having 5,118,777, whilst Virginia had 1,293,772, which, however, is only about 150,000 less than her share. The proportion of poultry in Virginia is double that of New York. And in all these articles Virginia is still more the superior of Ohio than of New York. So, also, is Kentucky. So that if it be said that New York is an importer of such provisions, and therefore consumes more than her production indicates, what is to be said of Ohio which exports them all. Now, in determining the relative comfort of two civilized communities in the same climate, the quantity of animal food they respectfully consume is a well established criterion. Yet, here is a State in the warmer climate, consuming the greater proportion. For when it is considered that the hog is killed for food at the age of eighteen months or two years, and neat cattle at five or six years, it will appear that the excess of animal food in Virginia or Kentucky over New York or Ohio is quite large—is quite large, indeed, even if we include the slave as well as the free population of the former States.

A reference to the quality of breadstuffs and other vegetable food, leads to the same conclusion. Virginia is the largest producer of wheat, the finest and costliest material of bread, of any other State, according to her population. Her crop of 1840 was 10,109,716 bushels; that of New York was only 12,286,418; of Ohio, 16,571,661. All these are wheat exporting, as well as wheat consuming, States, but still the great mass of that article must be consumed in the respective States of its production. In proportion to her white population, Virginia produces twenty-five per cent. of wheat more than Ohio, and two hundred per cent. more than New York. How is the deficiency supplied in New York? Not by importation, but by the substitution of potatoes, that cheapest article of vegetable food, to which the misfortunes or improvidence of Ireland have driven her. New York, instead of producing her proportion of wheat with Virginia, which would be thirty-five millions of bushels, instead of twelve, produces annually thirty millions of bushels of potatoes, and it is remarkable that Virginia, with nearly half a million of slaves, instead of resorting to this cheap food for them, produces only about three millions of bushels of potatoes, and provides her negroes with corn, of which her annual crop is about 34½ millions of bushels, and which is a much more costly and substantial article of food. The tendency manifested by New York to prefer the cultivation of the cheapest, but the more precarious and less nourishing article of vegetable food is also distinctly visible in all the Northern States, and is a fact which always deserves to be considered in any estimate of their present and future comfort. In Massachusetts agriculture is rapidly declining—particularly the production of the finer sorts of breadstuffs; a fact which is admitted and lamented by one of her leading papers—the Boston Atlas. The following statements are from the official returns of the State:

	Bush. Wheat.	Ind. Corn.	Barley.	Rye.	Buckwheat.	Potatoes.
1840	210,000	2,203,000	156,000	563,000	102,000	4,850,000
1845	48,000	1,985,000	121,000	447,000	32,000	4,769,000
Decrease,	162,000	218,000	34,000	116,000	70,000	83,000

Of course, it is not pretended that States of a commercial and manufacturing character chiefly, should produce as much from the soil in proportion to population, as the agricultural. But the articles they do produce, and their proportions to each other, indicate the quality of food at least of the agricultural population. Hence, it appears that the farmers of Massachusetts consume but little wheat bread, and use rye, Indian corn and and potatoes as substitutes.

(*To be concluded in our next.*)

ART. VI.—AGRICULTURAL AND PHYSICAL CAPABILITIES OF SOUTH CAROLINA.

TERRITORY—CLIMATE—SOILS—SWAMPS—NAVIGATION—HEALTH—NATURAL MANURES—MINERALS—AGRICULTURE—PRODUCTS.[*]

WHAT, then, are the agricultural capabilities of South Carolina? In richness, variety and abundance, perhaps, no part of the habitable globe, of the same territorial extent, exceeds them. Of the four great materials for human clothing—cotton, wool, silk[†] and flax[‡]—her climate and soil are peculiarly well adapted to the first three, and in locations to the last. Of the prominent articles of food, she produces rice, wheat, Indian corn, oats, rye, barley, sweet and Irish potatoes, and the different varieties of the pea tribe. For the habitation of man, the earth, her granaries and forests, furnish an inexhaustible supply. Iron, so essential to the wants of every class in society, is superior in quality, it has been ascertained, to any found in our country. Gold, not too abundant to divert from other and more profitable pursuits, but an inconsiderable amount of capital, excites the enterprise and rewards the labor of a portion of our citizens. In other minerals, hereafter to be noticed, she is neither deficient in quantity nor value. While the woods abound in game, including the deer and turkey, the ocean which laves her southern border, and the numerous streams, both salt and fresh, that penetrate every part of her surface, yield almost every variety of the choicest fish. In relation to medicinal and culinary plants, her catalogue is large. To tobacco, indigo[§] and hemp, which once were staple commodities; fruits and esculent vegetables that every where greet the eye; and other productions which minister to the comfort or necessities of her people, it is needless in this place especially to direct your notice. So remarkable indeed is her topographical condition, that wheat[*] and the sugar cane grow profitably side by side; and the orange and the olive ripen under the provident care of the same family of cultivators who extract the saccharine matter of the maple, but essay in vain to secure the maturity of the native corn of America.[†]

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[*] We are obliged to Governor Seabrook for his most able and elaborate essay upon the agricultural capacities of South Carolina, and the means of improving them—"prepared at the request of the State Agricultural Society." From this essay we make such extracts as appear above, and regret space will not admit of more. Governor Seabrook passes in review the whole duty of the State and its citizens, in regard to public wealth. He is particularly excellent in the discussion of "agricultural societies"—"the pine lands"—"reclamation of swamps"—"deep plowing"—"drainages"—"manure"—"peat"—"sheep walks"—"the grasses" "rotation of crops"—"the cow pea," &c. We are happy to perceive the Governor found use for our labors, which he has once or twice acknowledged in his essay, and would have been a little happier, perhaps—we say it pleasantly—had he dignified our REVIEW with a place in his *catalogue* of works valuable or useful to agriculturists, the more especially, as he was indebted to it for this very catalogue, which *we* prepared, some time ago, with much pains. See Com. Review, vol. IV, 444.

[†] In 1759, South Carolina exported 10,000 lbs. of raw silk.

[‡] *Linum Virginicum*, or Virginia flax, is an indigenous plant, and of the same family with *linum usitatissumum*, or common flax.

[§] Except in Orangeburg, where it is still a source of profit to a few planters, indigo is nowhere grown in South Carolina. That it is not inferior to that of India, has, I understand, been recently proved.

To comprehend this subject in all its relations, a more detailed examination is necessary.

1. South Carolina is most favorably situated,[‡] not only with regard to the States of the Union, but to the other portions of the globe. Midway between the frozen regions of the North and the burning heats of the tropics: in her climate, seasons and productions, it has been justly represented, that she combines most of the advantages of all. If we except tropical fruits, to which frost is fatal, her capacity successfully to rear all the grains, fruits and esculent roots, which enrich more southern countries, is nearly certain. Her latitude for cotton enjoys an extraordinary advantage. Much further South, the forcing nature of a vertical sun develops the plant too rapidly, thereby running it into weed and foliage; it is from the same cause most exposed to the ravages of the caterpillar and other insects. Further north, the season is too short to mature an abundant crop of balls, while the staple degenerates and becomes less valuable.

From the Sea-Islands the best cotton known to commerce is exported. So circumscribed are the limits in which it can be grown, that a half degree (32° 10′ to 32° 40′ north latitude) of the sea coast of North America, seems to be the precise point where the length, strength and firmness of the fibre are most happily blended. In reference to rice our State enjoys almost a monopoly.

2. South Carolina includes 30,213 square miles, or 19,435,680 acres. Of this area, there is as little land in one body, the highest authorities[§] assure us, unsusceptible of remunerating culture, as the United States can furnish. Undistinguished by mountains with their agricultural disadvantages, it is worthy of remark, that the spurs that make out from the great range which separates the waters falling into the Atlantic ocean and into the Gulf of Mexico, are capable of profitable tillage to their very summits.

3. As a difference of twelve degrees of latitude exists between the western and eastern hemispheres, the countries of the latter which are subject to the same atmospheric influences with South Carolina, comprise the most delightful and fruit-bearing portions of France, Italy, Turkey in Europe, Russia, Tartary and China.

4. Between the primitive and alluvial formations, the State is nearly

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[*] Wheat is cultivated in the State, with advantage, as low as N. L. 32° 30′.

[†] From bleak, cold winds, the northern side of the glassy mountains, it is said, will not produce maize.

[‡] Between 32° 4′ 30″ and 35° 12′ north latitude, and 1° 30′ and 6° 54′ west longitude from the capitol at Washington; or 78° 25′ and 83° 49′ west longitude from Greenwich.

[§] Messrs. Ruffin and Tuomey, late agricultural surveyors of the State.

equally divided. The soils, though of every kind, may be said to comprehend six varieties,* each the best suited to a certain crop, yet all of them capable of advantageously producing three-fourths of the vegetable products grown in its limits. While local differences are everywhere observable, the surface and soil of the upper districts present a great similarity; and this is equally true of the lower country. In the former, the lands are broken and hilly; in the latter, level; oak is the natural growth of the one; pine of the other. Clay is the soil of much the larger portion of the State; and, except in the immediate vicinity of the ocean, is almost the universal substratum. A close, stiff land predominates generally in the parishes, and an open sand on the Sea-Islands.

The high lands of the country, above the falls of the rivers, are naturally much superior to those of the pine-covered region—but the alluvial bottoms of the former are greatly surpassed in richness by the river swamps of the latter. In its capacity for permanent improvement, the granite half of the State has been more highly favored by nature than the alluvial. This is mainly ascribable to the open texture, permeable to water, of its clayey subsoil, and the potash in the soil and subsoil formed by the decomposition of the felspar and mica of the granite. In a few localities, however, the depth of the substratum and its proximity to the surface offer serious obstacles to a higher production. These, among other causes, seem yet to be operating against the cultivation of perhaps the greater part of those peculiar soils known as the "Flat Woods" of Abbeville; those in the neighborhood of Dutchman's creek and Wateree creek in Fairfield; and the Black Jack lands of Chester. Deriving their fertility from the hornblende† of the disintegrated rocks which lie below the close clay subsoil, it would appear that steady industry, incited and directed by ordinary skill, was alone wanting to preserve and perpetuate the uncommon productiveness, which, in despite of long-continued and improvident tillage, still distinguishes these remarkable tracts of land.

In reference to the soils of the primitive country, to one more peculiarity only, shall I now advert. Where the rocks lie horizontally, it is known that the soils derived from clay States frequently suffer from the impenetrable nature of the sub-soil and the position of the underlying rocks. In the regions to which they are confined in this State, they "are all highly inclined, presenting their edges to the surface and allowing the water to percolate between the strata."

5. The swamps, covering 2,000 square miles of land of inexhaustible fertility, are capable of thorough and economical drainage, and conversion into active and available capital.

The pine lands, embracing about 6,000,000 of acres, constitute the most neglected section of the State. While in some quarters, they are erroneously regarded as valuable only for the abundance and quality of their timber, in others, the belief is equally unsound, that their productive capacity is limited to plants which flourish solely in a thin and feeble soil. That, in all its relations, it is a district of country of immeasurable value to our community, will hereafter be attempted to be shown.

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* 1. Tide swamp, now appropriated to the culture of rice; 2, inland swamp, to rice, cotton, corn, peas, &c.; 3, salt marsh, to long cotton; 4, oak and pine, to long cotton, corn, potatoes, &c.; 5. oak and hickory, to short cotton, corn, &c.; 6, pine barren, to fruits, vegetables, &c.

† Hornblende contains about 12 per cent. of lime, and about 30 per cent. of iron.

6. South Carolina is most bountifully supplied with water. The base of her triangular form is washed by the ocean, and one of her lateral sides rests on a river accessible to vessels more than one-half its length, and small boats 100 miles beyond. Many bold and navigable streams, with numerous tributaries coursing through her territory in every direction, disembogue into the Atlantic at distances from each other the most suitable for the purposes of intercommunication and traffic. Before reaching the points where all traces of their distinctive character are lost for ever, by united contributions, they form a bold channel between the main land and the Sea-Islands the entire width of the State. Apart from the creeks and inlets of the sea, there is now an inland navigation equal to about 2,400 miles.

7. Greenville is the only division of our domain without the benefit of navigation. In all the districts, however, water courses abound, which afford remarkably eligible sites for mills. The rocks cross the streams nearly at right angles, and hence form a series of natural dams across their beds, and make falls that vary from five to eighty feet in comparatively short distances. In perhaps no equal extent of territory are there so many advantages of this sort presented.

In connection with this subject it is proper to add, that the metropolis of the State is only seven miles from the ocean; that its harbor is spacious, well protected from storms and at all times accessible.

8. Surprising to many as may be the declaration, South Carolina, in reference to her whole population, is a very healthy country, and by no means a sickly one with regard to her white inhabitants. If the alluvial region, and a few of the middle districts are subject to fevers in summer, the whole State in winter is comparatively exempt from the diseases to which more northern climes are peculiarly liable. The assertion, too, is with entire confidence made, that, even during the hot months, in perhaps one-half of her limits, foreigners may reside not only with impunity, but with renovated constitutions. In the neighborhood of every locality in which mephitic exhalations show the fatality of their power, there are sites for settlements where vigorous health, under the ordinary safeguards, is always secured. The entire sand-hill country and pine lands generally, as well as our towns and villages, furnish the most signal evidence of the salubrity of their atmospheric influence. It may here be appropriately observed that, while from causes, several of which are among the arcana of nature, the lower division is becoming gradually but steadily healthier, a portion of the middle zone is decidedly more liable to maladies of a fatal character. If a better system of drainage and other improvements in the cultivation of the ground, do not satisfactorily account for the one, certain agricultural practices are perhaps sufficient to explain the other. For the diseases which occasionally clothe in the habiliments of mourning the people of Abbeville, Union, Chester and York, it is supposed that the planters of those districts are competent to the diminution of the sources whence they spring. It is not unworthy of special remark, that the atmosphere of the swamps and marshes so poisonous to the white man, is at all times innocuous to

his slave. If it were not for this merciful provision of an all-wise Being, the alluvial region of South Carolina, in the immediate vicinity of its water courses, would soon become a dreary waste, and tenanted only by the beasts of the forest.

Of the cities of the Union, Charleston, and, it may be added, Columbia, show a lower mortality among their *acclimated* inhabitants than any others. With regard to the former, the number of deaths from all fevers (the endemic of the State), except from yellow fever, for the last 18 years, is 656, and in any one year 81, in a population of between 30 and 40,000. From yellow fever, which has prevailed as an epidemic but twice in twenty-two years, for the same period, the aggregate number of deaths is 646. The average mortality for the last six years, all clases included, is 1 in 51; blacks* alone, 1 in 44; whites alone, 1 in 58.†

9. The natural means of resuscitating the soil are abundant and widely diffused. A large portion of the lower country show exhaustless beds of the richest marl. Limestone, though obtainable only in York, Spartanburg, Laurens and Pickens, exists in such quantity in the first two districts, that, by railway communications, the entire primitive region will, at no distant day, be furnished with this earth, so essential to the nutrition and development of plants. While the sea shore parishes possess unfailing supplies of salt mud, salt grass, and shell lime, two-thirds of the State are most amply furnished with swamp mud and peat.

10. Of minerals and the primitive rocks, the number of the former is 28; of the latter, 9.

11. The botany of the State consists of about 3,000 species of plants. Of these, 2,000 are flowering, and 1,000 unprovided with flowers as parts of their organs of fructification. In relation to the former, about 65 are naturalized; that is, *foreign* plants introduced and now growing *wild*. There are about 150 grasses, of which 15 are natives; 30 species of esculent (for man), of which 3 or 4 are naturalized; and about 70 more used in medicine, agriculture and the arts, of which five or six are naturalized.

12. As a member of the Union, South Carolina in population occupies the eleventh rank; in territorial extent, the twenty-second; in the value of her *agricultural* exports, the fifth; in the value of the goods,

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* "In Charleston," says the Commercial Review of May, 1847, "the mortality, under 5 years, is 31 per cent.; in Boston it is 46. There are more deaths in Philadelphia from all fevers, including typhus and malarial, than from all fevers in Charleston, including yellow fever. From 1820 to 1830, in Philadelphia, the deaths from fevers were thirteen and five-tenths per cent. on all the deaths. In Charleston, for the last eighteen years, including two epidemics, the average mortality from fevers was eleven and four-tenths; leaving out yellow fever, which attacks almost exclusively strangers, the mortality from other fevers will not be found to exceed seven per cent.

† It appears from tables furnished a writer in the Commercial Review, by Dr. G. Emerson, that the average mortality in Philadelphia, among the *colored* population from 1821 to 1840, inclusive, was one in twenty-six; in Charleston, we know that for that time it was one in forty-four. In Boston the average mortality, it is said (see writer in Boston Medical and Surgical Journal, November, 1842), is one in fifteen. Why, in reference to the colored population, have vital statistics ceased to be published at the North? Let the abolitionists answer.

wares and merchandise of the growth, produce and manufacture of the United States,* the thirteenth.

The very large contribution of this State to the national wealth, which is determined by the amount and value of her domestic exports, and not her imports,† comes. too, from a limited part of her soil. The estimated number of acres in cultivation in 1820, was 1,221,000; at present it does not exceed 2,000,000, or about $\frac{1}{10}$ of her *arable* lands.

13. Taking the census of 1840 as a basis of calculation, South Carolina produces *communibus annis:*

Cotton,......	61,710,274 lbs.	Wool..........................	299,170
Rice,........	60,590,861	Tons of hay,..................	24,618
Sugar,.......	30,000	Potatoes......................	2,698,313
Wheat,......	968,354	Silk cocoons,.................	2,080
Oats,........	1,486,208	Barley, buckwheat, hops and wax,	19,989
Indian Corn,.	14,722,805	Value of lumber produce,........	$537,681
Rye,........	44,738	Barrels of tar, pitch, turpentine and resin,.....................	735
Tobacco,....	51,519		

If we divide their income, about $31,000,000, by the whole population, 594,398, the share of each is $52; of the white population alone, $119. Of rice, wheat and potatoes, the quantity per head is 108 lbs.; if one-half the amount of Indian corn be added, the quantity of bread food per head, omitting inferior productions, is 120 lbs. Of cotton and wool, the share to each inhabitant is 104 lbs. If the white population be divided into families of 4 (64,777), there will be of horses and mules, 2 to each; of neat cattle, $8\frac{3}{4}$; of sheep, $3\frac{1}{2}$, and of swine, $13\frac{1}{2}$. In reference to the whole population, the proportion of each, in neat cattle, sheep and hogs, is about $2\frac{3}{4}$. Supposing three-fourths of the white families (48,582) to be engaged in agriculture, and that 2,000,000 of acres are in cultivation, each family tills 41 acres, and realizes $476, or $11.60 an acre.

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* *Exported from Charleston in*

1820.....	$8,690,539	1829.....	$8,134,676	1838.....	$11,017,391
1821.....	6,867,515	1830.....	7,580,821	1839.....	10,318,822
1822.....	7,136,366	1831.....	6,528,605	1840.....	8,990,048
1823.....	6,671,998	1832.....	7,685,833	1841.....	8,598,257
1824.....	7,833,713	1833.....	8,337,512	1842.....	8,091,542
1825.....	10,876,475	1834.....	11,119,565	1843.....	7,010,631
1826.....	7,468,966	1835.....	11,224,298	1844.....	8,578,515
1827.....	8,189,496	1836.....	13,482,757	1845.....	8,366,250
1828.....	6,508,570	1837.....	11,138,992	1846.....	8,284,405
				1847.....	7,783,038

The value of the exports from 1840 to 1847, inclusive, has been furnished by the Hon. W. J. Grayson; the information for the previous years is extracted from De Bow's Commercial Review.

† *Duties received in Charleston for the Years*

1834....	$467,000		1842....	$300,000
1835.....	464,000		1843.....	340,000
1836.....	701,000	—Year of speculation and high prices.	1844.....	490,000
1837.....	474,000		1845.....	390,000
1838.....	590,000		1846.....	280,000
1839.....	640,000	—Year of high prices.	1847.....	387,000

The years 1840 and 1841, remarks the Hon. W. J. Grayson (Collector), are omitted, the record in the office being incomplete. The first and second quarters of 1840 amounted to $192,000, and the last quarter of 1841 to $116,000

ART. VII.—PRODUCTION OF BREADSTUFFS.

REPORT ON THE BREADSTUFFS OF THE UNITED STATES, MADE TO GOVERNMENT BY PROFESSOR LEWIS C. BECK.*

AGRICULTURE, commerce and the arts, constitute the chief business of the industrious portion of our race, and it is to the physical peculiarities of a country that we are chiefly to refer the predominance of one or other of these pursuits. Thus, England, with her vast mineral wealth, and her dense population, must almost of necessity be a manufacturing nation; and although she is also noted for her extended commerce, and her improved agriculture, the great attention which she has paid to the latter, may, perhaps, be fairly ascribed to those peculiar views concerning the interchange between nations which have heretofore prevailed. The rich and valuable mines of the central portions of the continent of Europe, and the numerous arts which can flourish only in their immediate vicinity, must ever give occupation to a large portion of their inhabitants. Comparatively few commercial advantages are enjoyed by them, and the produce of their agriculture seldom rises above the amount which is necessary for the supply of their own immediate wants. In all these countries, therefore, the failure of a single crop is the cause of serious apprehension, and in some of them, as in Austria, although a large proportion of the population is engaged in agriculture, there is need of a yearly importation of breadstuffs. This has been ascribed to a defective mode of tillage; but I am inclined to believe that it arises in part at least, if not entirely, from the high price of the land. It is the large returns which the farmer must extort from the soil in order to meet the interest of the heavy investment which discourages him in his efforts, and which at length has the effect of diminishing the amount of the agricultural products. All the appliances of science and art may be called into requisition to increase the yield of the soil, but every improvement of this kind only serves to increase the price of the land and the amount of rent which must be raised from it. When we look at the contrast which the United States present in this respect, we need not wonder, that while travelers speak in raptures of the agriculture of France and Belgium, Germany and England, the famished population of some of those countries has been fed by the surplus produce of a comparatively rude mode of tillage.

During the year 1847, breadstuffs to the value of $43,000,000, were exported from this country to Great Britain and Ireland alone. The vast agricultural resources of the United States were then for the first time duly appreciated. Notwithstanding the quantity exported during the present year bears no proportion to that of the preceding one, there can be little doubt that our country is destined to be the *granary of the world*. We cannot boast of those mineral riches which are found elsewhere; still, deposits of iron oar and coal, those most valuable products, exist here in great abundance. But our chief treasure is the soil, and the immense extent of our republic, and the liberal policy which has been pursued in regard to the disposition of its lands, places it in the power of almost every inhabitant to become the owner of a domain, which in Europe could be possessed only by the favored few.

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* The Patent office has given occasion to no more valuable paper than this. We hope the government will continue its investigations upon all our other staple crops—corn, potatoes, rice, cotton, sugar, tobacco, hemp. Nothing would be more valuable than an analysis of our sugar and cotton lands—though the States themselves might look to this matter. Hereafter, we shall make use of the various analyses of Prof. Beck for the information of our readers.

It is a common mistake that land which is in the highest state of cultivation, and yields the largest crops, is necessarily the most valuable. It is stated by Boussingault, that a field in the neighborhood of Pampeluna, where the rent of land is extremely low, gave a profitable crop of wheat, although the yield was not more than from six and a half to seven and a half bushels per acre. "An English farmer," says Washington, in a letter addressed to Arthur Young, "must have a very indifferent opinion of our soil when he hears that with us an acre produces no more than eight or ten bushels of wheat, but he must not forget that in all countries where land is cheap and labor is dear, the people prefer cultivating much to cultivating well."

It is this very extent of our country, and the cheapness of the land, which now, as at the date of the letter of Washington, contribute to render our comparatively rude culture the most profitable in the world. Thus, while the average of the produce of wheat in the United States is not probably above 15 or 16 bushels to the acre, that in Germany is more than 25 bushels; in England 25 or 26; and in France, 24. Still, as has been already stated, the amount of breadstuffs raised here, far exceeds that produced in either of the countries above named. And the same consideration, viz: cheapness of land, together with the rapid and cheap rate at which, by machinery, the crop is harvested and made ready for the miller, must give to the Western States and Territories great advantages for the cultivation of the cereal grain.*

As there is no probability that, for many years to come, our population will be over-crowded, and the price of good cultivable land be much increased, it is easy to see what must become the leading occupation of the multitude who will here seek refuge from the poverty and oppression of other countries. The truth of this proposition will probably be quite apparent to those whose attention has been directed to the subject. But a large number of our citizens have no just idea of the agricultural resources of the United States. One object of this report, therefore, is to spread out the facts, and to give them the widest publicity; to show, indeed, that while commerce and the arts must give employment to a great number of persons, our great business is agriculture; and that the true interests of the country will be promoted by giving to this pursuit all necessary encouragement.

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* Mr. O'Reilly stated at one of the meetings of the New York State Agricultural Society, during the winter of 1844, that the product of the wheat lands, between Seneca lake and the Niagara river, had not, for the preceding three or four years, exceeded the low average of eleven or twelve bushels per acre. The land in western New York generally bears a high price, and the problem to be solved is, whether, by a more efficient system of agriculture, the average yield can be so much increased as to afford a return for the investment. What will be the result may be inferred from the well known fact that a large proportion of the wheat flour, with the "Genesee and Oswego" brands, is obtained from wheat grown in the far western States.

I have said that our mode of culture is still comparatively rude. It was quaintly remarked to a traveler by the gardener of Drummond castle, that "if science once gets into the farmer's ground it penetrates into the very heart of a nation." This is perhaps true;* but it must be confessed that, thus far, the influence of science upon agriculture has been very trifling when compared with the vast improvements which it has effected in the arts. The difference proceeds principally from two causes assigned by Count Chaptal: "The first is, that the greater part of the phenomena offered to us by agriculture, are the effects of the laws of vitality which govern the functions of plants, and these laws are still in a great measure unknown to us; while in the arts which are exercised upon rude and inorganic matter, all is regulated, all is produced, by the action either of physical laws only, or of simple affinity, which are known to us. The second cause is, that, in order to apply the physical sciences to agriculture, it is necessary to study their operations profoundly, not only in the closet but in the field." It will not, therefore, appear surprising that the researches which have been made in regard to plants have often assumed a wrong direction, and have not led to those important results which were promised upon the one side and expected upon the other. Thus, most of the analyses of the proximate principles of plants, not having been made upon such as are in a perfectly pure state, are to be considered only as approximations of the truth. The same remark will, in a great measure, apply to the numerous determinations of the quality and quantity of the ash obtained by the combustion of the grains used as breadstuffs. "The grain is an assemblage of various distinct parts, differing from one another in composition, and varying also very much in their relative proportions. So, also, the dried stem of a plant, the entire straw of a cereal grass, may be burned in like manner. But this, too, is an assemblage of many parts. The exterior less vascular portion, the interior full of vessels, the fluids which circulate through them, all contain their peculiar inorganic substances, and all vary almost endlessly in their relative proportions."†

Similar objections might be urged against the analyses of soils, which have been so vigorously prosecuted by many chemists. That the facts which have thus accumulated may have some value, is not to be doubted; but they must after all be considered as only introductory to researches conducted with a more just appreciation of their true influence upon the improvement of agriculture. It is to be feared that in many cases these almost useless labors have been suggested by the crude and hasty generalizations, which, unfortunately, within a few years past, have too often usurped the place of patient inquiry. A recent writer has well observed, that "of the classes which have been thus led away, there has been none which has been so far misguided as the sober one of the farmer. It is to him that the vegetable quack appeals, offering, in the application of chemical manures, electricity, magnetism, and other agents, harvests more golden than the world had ever seen before."

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* I say "perhaps," because in agriculture, as in all well conducted enterprises, every thing depends upon a comparison of an estimate of the expenses with an estimate of the profits which accrue from them. Paradoxical as it may seem, it is nevertheless true, as stated by Chaptal, that a farmer may be ruined by a good harvest. When science, therefore, suggests a lavish expenditure simply for the sake of insuring a large yield per acre, she does a positive injury. The end of those who follow at random all the innovations proposed, is invariably disastrous.

† The above remarks are from Prof. J. F. W. Johnston's advertisement to the English translation of Mulder's chemistry, Part III. Prof. Johnston has himself been largely engaged in the kind of researches which he now characterizes as indeed possessing some agricultural value, but which must be entirely dismissed by the exact physiologist. To set this matter in a still stronger light, he adds the following: "An amusing English chemist lately dried and burned an entire mouse, and, from the results of his combustion, drew grave results in regard to points which lie at the very confines of our existing knowledge. He might as well have put a whole man in his crucible or his combustion tube, and reasoned upon the nature of the ash, or the proportion of the gases he had collected."

I trust it will not be inferred from any of the remarks which I have made, that I undervalue the importance of physical science in the improvement of agriculture. On the contrary, I doubt not that, with a right appreciation of its objects and a true direction of its labors, it is destined to contribute greatly to increasing the productiveness of the soil. But such results cannot be immediately realized. "Years of experiment must pass by, numerous failures must be experienced, before the real advantages of scientific farming will be evident." It is sincerely to be hoped that the false expectations which have been from time to time held out by visionary men, may not have the effect of exciting in the minds of agriculturists a prejudice against all the improvements which may hereafter be proposed.

The chief breadstuffs of the United States are wheat, rye, maize, and buckwheat. Of these, the first is by far the most important, and it is to its history, culture, and chemical examination, that particular attention is now to be directed.

WHEAT.—Wheat is the principal breadstuff of the United States and of most European nations. This, as well as the other cereal grasses, has probably come to us from the east; but it has been so much changed and improved by culture, that its connection cannot be satisfactorily traced to any species of the genus now known to be growing wild. Of all the cereals, it is that which requires most heat, and its culture first begins to be of importance below 60° North latitude in Europe, and considerably below that line on our continent. From the meteorological observations which have been made, we infer that a mean heat of at least 39° Fahrenheit is necessary for the growth of wheat, and that during three or four months. The mean summer heat must rise above 55 Fahrenheit. It does not, however, bear tropical heat well. In countries within the tropics it first occurs at altitudes which in climate correspond with the sub-tropical and temperate zones.*

There is a fact stated by the author just quoted, which exhibits in a striking manner the advantages our country must possess for raising and transporting the produce of this important cereal. It is, that although wheat is very productive and of excellent quality in Chili and the republic of Rio de la Plata, and immense quantities are sent to Peru and even around Cape Horn to Rio Janeiro, yet North American flour is sold at the market of Valparaiso, and the bakers are obliged to buy it, as it is cheaper than the flour made in the country, because there are no roads in the interior, and wages are exceedingly high from want of sufficient hands.

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* Meyen's Outlines of the Geography of Plants.

There are few parts of the United States in which wheat may not be raised. But the productiveness of the crop is influenced by various circumstances, as soil, climate and expense of transport to the great commercial depots. These and the more profitable cultivation of other articles, as tobacco, rice, cotton and the sugar cane, have nearly fixed the southern limit of the wheat growing region of the United States in North Carolina.* The particular districts, however, in which the culture of the cereal is most successfully prosecuted, are the western parts of New York and Pennsylvania, Ohio and the north-western States and Territories. The rich and virgin soil of the western prairies seems to be peculiarly adapted to the growth of wheat; and the great lines of communication which are already established between these and the Atlantic cities, afford every facility for the transport of the surplus produce.

It has been already remarked that the profits of the culture of this cereal do not depend upon the yield per acre, but upon the cheapness of the land and the economy practiced in its management. The want of precise information upon these cardinal points, renders the statements which have been made in regard to the productiveness of wheat in various parts of the world of little practical value. Thus, when we are told by Meyen that in Prussia the average produce of wheat is not more than five or six fold of the seed; that in Hungary and Croatia it is from eight to ten fold; and that in some parts of Mexico the produce in favorable years is from twenty-four to thirty-five fold, the information is of no use to the farmer, because the relative expenses of the culture and the value of the crop are not stated.

Notwithstanding what has been said concerning the profitable culture of wheat, in large portions of the United States, and the probability that the great West will hereafter furnish the principal supply for export, we should by no means overlook those causes which exert an influence upon the productiveness and quality of this grain. It has been ascertained without doubt that the real value of wheat and of the other cereals and breadstuffs, depends mainly upon the proportion of gluten and albumen which they contain—their starch, glucose and dextrine or gum, not being considered nutritive. It appears, also, that wheat exceeds all the other cereals in the quantity of nutritive matter which it yields. Another advantage which it possesses is, that it furnishes also a greater quantity of flour; for fourteen pounds of wheat yield thirteen pounds of flour, while fourteen pounds of oats yield only eight pounds, and an equal quantity of barley but twelve pounds.†

That wheat is peculiarly sensible to the effects of soil and climate appears to be a well established fact. It is stated that even in different parts of England the crops and their produce are very various. The Sicilian and southern wheat generally contains a larger proportion of gluten than that from more northern countries. This, no doubt, arises from its more rapid growth, its harder and tougher grain, and its less proportion of moisture. Hence, also, it keeps better, and commands a higher price in market, especially when required for exportation. I have reason to believe, however, that the superiority of southern wheat has usually been over-estimated, and that the proof almost always adduced of its containing more gluten than that from the north, viz., its employment in the manufacture of macaroni and vermicelli, is by no means conclusive.[*]

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* Mr. J. B. O'Neall, in an address before the Agricultural Society of South Carolina, estimates the value of the flour imported into that State at $260,000, of corn $150,000, of oats, peas and hay, $585,000.

† Burnett's Outlines of Botany.

One of the most important points connected with the subject of wheat and wheat flour, is the proportion of water or moisture which they contain. We have the high authority of Boussingault for the statement that, in France, "it is undoubtedly in consequence of the large quantity of water which the northern wheats contain, that we meet with such indifferent success when we attempt to keep them for any length of time in our granaries. The wheat of Alsace, for example, frequently contains 16 to 20 per cent. of moisture; and I have ascertained, by various experiments, that it is almost impossible to keep it without change in vessels hermetically sealed. To secure its keeping, the proportion of water must be reduced to from 8 to 10 per cent., and this is nearly the quantity of moisture contained in the hard and horny wheat of warm countries.[†]

In five analyses of London flours, by Mr. J. Mitchell, the proportion of water varies from 14.10 to 17.40 per cent.[‡]

The proportions of water in the above samples, range much higher than those given in the analysis of various flours performed by Vauquelin, which are from 8 to 12 per cent. They are also higher than those in the United States flours—the range of moisture being in the samples which I have analyzed from 12 to 14 per cent.

This difference in the proportion of water, which seems to be a matter of so much consequence, is undoubtedly, in part, due to the difference in the climate of the region in which the wheat is grown. This, indeed, is so well understood to be true, that the amount of bread obtained from different kinds of wheat flour is referred to the same cause. Thus, "it has been shown, by a comparative experiment tried some years ago upon Scotch and English wheat, of apparently equal quality, that a quarter of the latter, though yielding rather less flour, yet, when made into bread gave 13 lbs. more than the former. This is accounted for by the greater strength of sunshine, under the climate of England, having an effect upon the grain when ripening, which occasions the flour to absorb more water in the formation of dough."[§]

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[*] According to the analysis of Professor Johnston, the fine flour of the celebrated Amalfi, or macaroni wheat, brought from Italy by Colonel Hamilton, contains, in 100 parts, 13.30 of water and 11.62 of protein compounds (chiefly gluten). This is not above the average of the proportion of gluten contained even in our New York and western flours. Mr. Walter, in his "Letters from the Continent," describes the process for fabricating macaroni, which is very simple, and adds: "It is my firm belief that if any spirited individual would commence its manufacture (in England), on an extensive scale, the Italian macaroni would soon cease to be an article of importation."—(*London Quarterly Journal of Agriculture, vol. II., p.* 462.) I have no doubt that this manufacture might be successfully carried on in various parts of the United States, especially if some care was used in the selection of those kinds of flour which are known to be rich in gluten.

[†] Rural Economy.

[‡] Treatise on the Falsification of Food, &c.

[§] Penny Magazine, vol. 75.

From experiments which seem to be trustworthy, it appears that the Alabama and the southern wheat flours, generally, yield more bread than the northern or western. The gain in favor of the Alabama, as compared with the Cincinnati, is said to be 20 per cent. It is also stated, by one of the most extensive London bakers, that American flour will absorb 8 or 10 per cent. more of its own weight of water in manufacturing it into bread or biscuit than the English wheat. The English wheat of the same variety with the American is invariably a larger and plumper berry. This is attributed to the longer time required for ripening in that comparatively cooler and damper climate. The American, on the contrary, in ripening under a hot sun, evaporates a larger proportion of water, and leaves the farina in a more condensed state, and when exposed again to moisture in cooling, it absorbs the additional quantity above stated. This is an important fact of which the dealer and consumer should be fully aware.*

No apology is necessary for the details which will be presented concerning the effect of water or moisture upon this cereal, as it is a subject worthy of the most serious consideration. Although, as has been observed, the proportion of water in the wheat and wheat flour of the United States is generally less than in those of England, France and the North of Europe, it is often in sufficient quantity to cause great losses, especially when shipped to tropical countries. So early as the year 1814, attention was directed to this in a valuable series of papers published by Mr. Jonas Humbert, of New York,† a large dealear in flour, and at one time a deputy inspector of that article. He states, that since the Revolution, the price of the New York wheat flour in the markets of Europe and the West Indies had been gradually falling below that of Pennsylvania and Virginia. He asserts, as the result of his own experiments, that the New York flour is equal to that obtained from wheat raised in any other State or country; and he attributes the deterioration in the price of the former to carelessness on the part of those who are engaged in its preparation and shipment. Among the points which he enumerates are, a want of attention to the ventilation and proper drying of the grain before it is ground, the rapid and improper mode of grinding, regrinding the middlings, and mixing therewith the portion first ground,‡ and also the still more objectionable practice, perhaps still followed, of mixing old and spoiled flour with newly ground wheat.

It is stated, that in Poland, where the ventilation and drying are continued for some time, wheat has been preserved sound and good for half a century; its age never does it injury, and such wheat is said to yield handsomer and better flour than that obtained from the grain more recently harvested.* In Dantzic, the preparation for keeping wheat continues for a year and sometimes longer; after this period it is often kept for seven years perfectly sound in the large granaries of that place, although surrounded by the sea.

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* From an article in the Toronto (Canada) Herald.

† Transactions of the Society for the Promotion of Useful Arts, in the State of New York, vols. III and IV.

‡ Mr. Humbert objects to the mixing of the produce of the first and second grinding, and putting up the whole for superior flour. "To the eye," he says, "this mass appears very fine; but when mixed with water it is very deficient in elasticity, and on being worked with the hand, is similar to clay mixed with water." The mode of management here spoken of is no doubt resorted to from improper motives; but whatever may be the difficulties in working such a mixture, it so happens that it contains more nutritive matter than the fine flour alone. But of this more hereafter.

In regard to American wheat and wheat flour, it may be remarked, that the proportion of water naturally existing in them is often increased by carelessness in harvesting the grain, and in its transport and storage. In one sample of Indiana wheat flour recently analyzed, which was sour, and had but little more than one-half the usual quantity of gluten, the injury was probably caused by the hurried mode of packing, for the changes above noticed occurred before the opening of summer. Sometimes, however, our flour is spoiled by being stored in damp, warm, and ill ventilated warehouses. The books of one inspector of the city of New York, shows, that in 1847, he inspected 218,679 barrels of sour and musty flour. He certifies that in this amount he is of opinion that there was a loss sustained of $250,000.† But as no flour that is known to be sour or bad is inspected, this statement gives a very imperfect idea of the loss incurred, even in that city. The total amount of loss for the whole United States arising from chemical changes in breadstuffs by internal moisture, has been estimated at from $3,000,000 to $5,000,000.

Some remarks upon this subject, recently published‡ by Mr. Broadgeest, of Hamilton, Canada West, deserve to be here introduced. This gentleman has paid much attention to the preservation of food, both as a merchant and as president of the board of trade of Montreal and of Hamilton. He notices an article on the "Preservation of Food," in the January number of the Westminster, the author of which proposes the exclusion of air, by an air pump or otherwise, as a remedy for the injuries sustained by breadstuffs, and very justly observes that these extreme measures are wholly unnecessary, as arrangements perfectly feasible will answer the purpose. He admits the necessity of something being done, as "the present system is wasteful, and contrary in many respects to common sense; the warehousing of grain is defective in every point of view. The common mode of shipping wheat, or other grain in bulk, is the cause of injury with American grain, and I doubt not also with the European. The emptying of grain loose into barges not over dry;§ spray and moisture on the voyage to the shipping port;

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* It will be seen, however, that the flour from the samples of Poland wheat which I have analyzed, yielded comparatively small proportions of gluten. All the samples were in excellent condition, and seemed to have sustained no injury by shipment. But from some experiments which I have made, I am induced to believe that wheat which has been long kept may suffer a diminution in the amount of gluten without presenting any external evidence of the change which has taken place. Wheat flour, when carefully managed in the mode hereafter to be described, retains its nutritive matter in a more stable form. If this view is correct, it should have some influence in determining the best mode of keeping breadstuffs for future use or for shipment.

† Observations on the Production, Manufacture and Preservation of the Cereal Grains; by J. R. Stafford.

‡ Westminster Review, for October, 1848.

§ A gentleman residing in the city of Albany, N. Y., informed me that during the past season he witnessed an operation which, if generally performed, will sufficiently account for all the losses sustained in the shipment of the cereal grains. Several persons were engaged in transferring wheat from a canal boat to a river barge; and, while this was going on, it was the business of one of them to sprinkle exposure to weather while being shipped; damp lining boards; damp vessels; damp during the voyage, and then again being exposed in a lighter and put away in a damp warehouse, or in a low situation on the bank of a river—all tend to the destruction even of the finest particles of grain."

As remedies for all these injurious influences, Mr. Brondgeest proposes the shipment of grain in barrels like flour, and the proper kiln-drying of such varieties as are known not to keep well. The souring of flour, either on the river or sea voyage, or after warehousing, he adds, "can be perfectly prevented by the use of the kiln, either to the flour, or the wheat, prior to grinding; one-third to one-fifth of the wheat being highly dried makes the whole keep perfectly for years, and that third or fifth may be of the cheap spring grain, making much stronger and better flour; but which if not kiln-dried would sour the whole."

In the report of the Commissioner of Patents, dated March, 1844, there are some statements of interest in regard to kiln-dried flour and meal. From these it appears that Ohio flour, after having been subjected to the drying process, was kept in the southern and South American ports in good, merchantable order, and in weather in which other flour, not thus prepared, invariably spoiled. The process of drying, here noticed, was conducted by the employment of hot air; and Mr. Gill, who claims the invention, states, that eighteen pounds of water are thus expelled from a barrel of flour.

There can be no doubt, therefore, that the removal of a portion of the water which wheat flour and maize meal naturally contain, is the easiest and best means of preserving them. But the drying process, simple as it may seem, requires to be carried on with great care. The passage of the grain or flour, however rapidly, over highly heated surfaces is apt to scorch, and thus give them an unpleasant flavor. From the rapid evolution of the moisture in the form of steam by the heat thus applied, unless proper ventilation be also secured, further injury will probably result. The steam again condensing into water upon the cooling of the flour, may accumulate in particular parts of the mass operated on, and thus, perhaps, render it at least equally as liable to injury as it would have been without the employment of this process.

Another fact which I have observed in those samples of wheat flour that have been exposed to a degree of heat high enough to expel all the water is, that the gluten is less tough and elastic—a proof that its quality has been impaired. It is probable that the proportions of dextrine and glucose may thus also be increased at the expense of the starch. Under these circumstances, a subsequent exposure to moisture and a slight elevation of temperature, establishes the lactic acid fermentation, which, I suppose, is the chief cause of the *souring* of flour.

The advantages to be derived from artificial drying, are more fully attained by the invention patented by Mr. J. R. Stafford, in 1847, than by any other plan with which I am acquainted. It is based upon the

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the grain quite freely with water, containing in solution a portion of common salt. As soon as one pail-full was exhausted, another was prepared; and the effusion was continued until the work was completed. The addition of the salt to the water was a mere cover for a really fraudulent and most reprehensible operation.

process for drying organic bodies usually adopted in the laboratory. The grain or flour is brought into contact with a surface of metal heated by steam, and a due degree of ventilation, so important to the completion of the drying, is secured. As the heat is not raised above that of boiling water, there is no danger of injuring the quality, color or flavor, of the substances subjected to its action. The heat is, moreover, uniform, and the expense is said to be less than that of the mode of drying heretofore generally adopted. By Mr. Stafford's apparatus 16 or 17 pounds of water are expelled from each barrel of flour; this reduces the proportion of water to four or five per cent., an amount too small to be productive of injury. Absolute dryness cannot be easily attained except by a long exposure of the flour to the heat, and it is not required for its preservation; a reduction of the amount of water to the small per centage just stated, has been found to be amply sufficient to secure this object. I cannot, in my opinion, render a more important service to dealers in breadstuffs, than to recommend strongly the employment of this or a similar process of drying.

After the proper ventilation and drying of the grain has been effected, there is still another point deserving of some consideration. This is the absorptive power of the different kinds of flour, which I have found by experiment to be subject to considerable variation. The amount of moisture absorbed by the various samples which have been tried, after having been brought to a state of absolute dryness, ranges from 8 to 11.65 per cent. by an exposure to the air of a room, for from 18 to 24 hours. This difference in the hygrometic character of flours, must, I think, have an influence upon their preservation, and will perhaps account for the fact, that with the same degree of carelessness and the same exposure, some kinds are more liable to spoil than others. The remedies for all the difficulties to be apprehended from this source, are the employment of tight barrels, and the avoidance of all unnecessary exposure of their contents to the air.

Some remarks may be added more definitely to explain the various modes in which wheat flour, especially, is injured by the presence of an undue proportion of water under the influence of a warm climate. The general result is a diminution in the quantity of gluten, or such a change in its quality as renders it unfit to produce good panification. It sometimes also favors the formation of sporules of different kinds of mushrooms which are afterward developed in the bread.

Dumas states that the wheat of 1841, exhibited in 1842, during a very warm summer, this defect in a very great degree. When these mushrooms were developed, the temperature was much elevated, and the bread soon disappeared, leaving only a reddish and disgusting mass.

The number of sporules was much diminished by the thorough washing of the infected grain, followed by prompt desiccation. By reducing the proportion of water, increasing the dose of salt, and finally by raising the temperature of the oven, the development was in a measure prevented.*

A few years since, I observed reddish sporules similar to those above noticed in a sample of New Jersey flour. The change took place in twenty-four hours after it had been made into a paste with water. On repeating the experiment, the same result followed.

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* Dumas, Chimie Appliquée aux Arts.

According to Dumas, moisture and heat, which often cause such changes in the most important constituent of wheat flour, produce very little effect upon the starch which it contains. Although it is with some hesitation that I dissent from such high authority, the following facts appear to me to show that this idea is an incorrect one:

Starch is known to be composed of particles which are insoluble in cold water, but when exposed to a heat of 180° F., the pellicle of the grain bursts, and the contents are liberated. In a state of solution, it is quickly converted into dextrine and glucose, or grape sugar, by the addition of a small quantity of diastase.* If this mixture be kept in a warm place for a few days, it acquires a new property, viz: that of converting the glucose into lactic acid. This is denominated the *lactic acid fermentation;* and, as I have before suggested, it is probably one of the causes of the *souring* of flour when exposed to high summer heats in its ordinary moist condition. Hence, it will be found that, while in sour flour the quantity of gluten is usually diminished, or its quality injured, the proportions of glucose and dextrine are also, in many cases, increased at the expense of the starch—a change which precedes the development of the lactic fluid.

One of the best modes of determining the real value of wheat and other flours, is to examine the bread made from them. The process of panification brings out all their defects, and as the researches upon breadstuffs are conducted chiefly with the view of ascertaining their suitableness for the manufacture of bread, it affords a good standard of comparison for the various samples subjected to experiment. It should be remembered, however, that bread is sometimes adulterated for the very purpose of enabling those who are engaged in its fabrication to use the poorer kinds of flour. Thus, Dumas states that in Belgium and the north of France, sulphate of copper (blue vitriol) has long been introduced into the manufacture of bread. By the employment of this salt, the bakers can use flour of middling and mixed quality; less labor is required in its preparation, the panification is more speedy, and by its addition a larger quantity of water is taken up.†

The use of alum in the fabrication of bread seems to have been practiced from a remote period. This, it is said, also secures to the baker the advantage of employing inferior kinds of wheat flour, and even of mixing with the farina of beans and peas, without apparently injuring the quality of the bread.

The alkaline carbonates, the carbonate of magnesia, chalk, pipe clay, and plaster of Paris, have all been used, either to correct the acidity of damaged flour, to preserve the moisture, or to increase the weight and whiteness of the bread. But it need scarcely to be observed that all these substances, with perhaps the exception of small additions of the alkaline carbonates, must render the bread unwholesome. Fortunately, however, the presence of most of them can be quite easily detected.

Other frauds which have been resorted to, are more difficult of detection; but these are, happily, less prejudicial to health, although not always perfectly harmless. Among these may be mentioned the adulteration of wheat flour with potato starch, the flour of leguminous plants, buckwheat, rice, linseed, &c. Mareska, in a recent paper, states that he has had occasion to examine several samples in which these frauds had been practiced, and he describes several processes by which their occurrence may be ascertained.*

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* This is a peculiar nitrogenous principle which exists in the grain of the cereals after germination commences.

† Traité de Chime Appliquée aux Arts, vol. VI., p. 429.

According to a statement made by a quartermaster in the United States army, one barrel of flour, or 196 pounds, when in dough, contains about 11 gallons, or 90 pounds of water, 2 gallons of yeast, and 3 pounds of salt; making a mass of 305 pounds, which evaporates in kneading and baking about 40 pounds, leaving in bread about 265 pounds; the bread thus exceeding in weight the flour employed by about 33.50 per cent.

Dumas informs us that 130 pounds of the common white bread of Paris are obtained from 100 pounds of flour. To this he adds, that the flour contains 17 per cent. of water, the produce being then equivalent to 160 pounds of bread from 100 pounds of flour.† As the American wheat flour seldom contains more than 14 per cent. of water, the statement of the quartermaster corresponds very nearly with that of the French chemists. The increase of weight in the bread over that of the flour, viz., 33.50 per cent., ought to afford an ample remuneration for its manufacture. But it is not unfrequently the case that larger demands are made by those who are engaged in this important branch of art.

The deficiency in the weight of bread, and the extent of the imposition practiced in the sale of loaves at a certain price, can, in general, be very easily ascertained. For example, the proper weight of the shilling loaf (New York currency) may be determined by reducing the price of flour to shillings, and then dividing 196 by this amount. Thus, the price of flour being $7 a barrel (which is a sufficiently high average for even the best brands during the year past), the shilling loaf should weigh three and a half pounds. For $7 + 8 = 56$; $196 \div 56 = 3.50$. This will leave twenty loaves of the same weight, or $2 50 as the profit on the manufacture.

Although the whiteness of bread is considered as a mark of its goodness, it has been ascertained by Professor Johnston, that fine flour contains a less proportion of nutritive matter than the whole meal. The correctness of this view has been confirmed during the present investigation; for, in two or three samples of wheat which I have analyzed, it was found that the amount of gluten in the fine flour was less than in the flour passed through a coarser sieve and containing a larger proportion of bran.

These results, according to Professor Johnston, are to be accounted for on the supposition that the part of the grain which is most abundant in starch crushes better and more easily under the millstones than that which, being richest in gluten, is probably also tougher, and less brittle. They are also consistent with the greater nourishment generally supposed to reside in household bread, made from the flour of the whole grain.* But such is the controlling influence of custom, that it is perhaps in vain to attempt a change, even though its benefits may be clearly proved by the researches of science, and by an extensive experience.

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* Journal de Pharmacie—quoted in the London Pharmaceutical Journal, for February, 1848, p. 394.

† Boussingault gives the same proportions for the white bread of Paris. But he says, in the country, where the bread is less baked, 100 parts of flour give 140, 145 and 146 of bread.—Rural Economy, p. 173.

ART. VIII.—THE STATE OF ALABAMA,

HER RESOURCES AND THE PROPORTION OF WEALTH SHE CONTRIBUTES TO THE NATIONAL WELFARE.

NATURAL ADVANTAGES.

OPEN to the Gulf of Mexico on the south boundary, with a spacious bay, over the bar of which ships drawing twenty and three-quarter feet at low tide safely ride, and into which all of her rivers (with two exceptions) flow—the one invites thither ships of the largest class, and the others bear to Mobile, from the fertile valleys and plains above, their valuable productions. Alabama is watered by the following noble rivers:

Names of Rivers.	Navigable, description, &c.	Miles in Alabama	Empties into.
Mobile..........	Largest class steamers............	60	Mobile bay.
Alabama.......	The same......................	450	Mobile river.
Mombigbee.....	The same......................	540	The same.
Warrior........	The same......................	150	Tombigbee.
Tennessee	do. for 1,000 miles altogether ..	130	Ohio river.
Chatahoochee...	The same, eastern boundary.......	200	Apalachicola.
Coosa..........	Large steamers below and small above the falls......................	170	Alabama.
Cahawba.......	For small steamers and flats........	120	do.
Tallapoosa	do......................	40	do.
Noxuba........	do......................	50	Tombigbee.
Suckernochee...	do......................	35	do.
	Navigation..................	1945	Miles in length.

Such are our great and peculiar advantages of navigation that our citizens will never be compelled to abstract from other investments—they may choose largely of their capital for internal improvements. But there is a railroad now in progress, the Mobile and Ohio, that I may properly regard as associated with the natural advantages of the State. The Gulf of Mexico, sweeping up into this division of the continent, continued northerly by the Bay of Mobile, with the Mississippi river inclining from its mouth north-east, throws this river at the mouth of the Ohio within *four hundred and forty-five miles of Mobile*, the commercial emporium of Alabama. The country between those two points being remarkably level, the route unobstructed by a single mountain or river, or any stream of moment, and running in its whole extent through one of great beauty and fertility, and already settled by an active and wealthy population, must throw their great trade and travel through Alabama into Mobile; and in twenty hours or less citizens of Missouri, Ohio, Kentucky or elsewhere, may leave Columbus, in Kentucky, the upper terminus, and arrive at Mobile with their produce in one-fifth the time they could reach New Orleans.

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* Highland Society Transactions, 1847; and Skinners Farmers' Library, vol. III, pp. 142, 143.

Before I proceed to the other very interesting portions of this branch of the subject, I will here allude to such internal improvements as are already completed or are in active progress:

The Muscle Shoals canal,	complete	35¾	miles.
Huntsville canal,	do	16	"
Tuscumbia and Decatur railroad,	do	44	"
Montgomery and West Point, nearly,	do	87	"
Cahawba and Marion, do	do	35	"
Canals and railroads, length		217¾	"

A railroad from Selma, or some other points on the Alabama, to the Tennessee river; one connecting the Tuscumbia and Decatur with the Mobile and Ohio road; and another from Blakely, opposite Mobile, to Columbus, Georgia—each of which would add greatly to the traffic and wealth of the State, and pay good dividends—are perhaps the only ones of importanee contemplated.

To continue with natural advantages. From Tuscaloosa, on the Warrior, in the direction of Selma, on the Alabama, are bituminous coal-fields and iron oar, with marble and hard and soft limestone quarries, in rich and inexhaustible profusion, immediately on navigable streams. The lands are covered with splendid forests of white and live oak, cypress, pine, cedar, mulberry, hickory, &c. Water power is unlimited and never-failing. Irrigated by so many streams, as indicated by 1,945 miles of navigation, with the innumerable tributaries thereto, the lands of Alabama are of amazing superiority, as their productions hereinafter noticed will exhibit, and, with a climate temperate and uniform, it is decidedly healthy.

PRODUCTIONS.

To regard alone the ascertained value and extent of the surplus products of Alabama which we ship off, compared with those of other States, omitting an estimate of our own heavy consumption of corn, wheat, hogs, cattle, sheep, timber, cotton consumed in home manufactures, value of negroes raised, and horses and mules raised, which would amount to several millions—confining ourself to the surplus productions, I say we will, I think, do so with some astonishment, as associated with it must be the effort to estimate the vastness of the capital employed to produce it. Her surplus productions are cotton, lumber, staves, turpentine, manufactured cottons, coal, &c.

What is her cotton crop and its value? I will arrive at it in this way, and pardon me for assuring those who read this that I am quite sure I shall not be far from correct. To the amount of cotton received at Mobile I will add the quantity raised in North Alabama, which is forwarded down the Tennessee or hauled overland to Memphis. I will also add the quantity which goes down the Chatahoochee to Apalachicola. Adding these together, I will deduct the quantity raised in the eastern counties of Mississippi. This will show the crop of Alabama to result as per following table:

Where received and raised.	No. of bales of cotton for years		
	1846–7	1847–8	1848–9
Alabama and Mississippi, at Mobile, ...	323,462	436,661	530,000
North Alabama to New Orleans, as per census of 1840, 49,225,474 lbs., at 510 lbs. to the bale, is.........	*96,500	*96,500	*96,500
East Alabama shipped to Apalachicola for Chatahoochee, ...	†50,000	†50,000	‡50,000
	469,962	583,161	676,000
Less Eastern Mississippi crop, ...	‡60,000	80,000	80,000
Net crop of Alabama in bales....................	409,962	503,161	596,000

And the following table will show the value of those crops of cotton, at the average price it sold at, of the respective seasons at Mobile for the three years:

Year.	No. bales.	Weight of each.	Total lbs. and average price.		Total value.	
1846–7........................	409,962	510 lbs.	209,090,620	10¾	24,570,972	85
1847–8........................	503,161	510 lbs.	256,612,110	6¾	17,321,317	42
1848–9........................	596,000	510 lbs.	298,760,000	6	17,956,200	00
	1,509,123		764,452,730		59,848,483	30
Average of three years, ...	503,041		254,817,577		19,949,494	43

Enormous as this is, yet this great interest of Alabama, as well as the whole South, does not yield so profitable a dividend on the capital invested as other investments elsewhere do.

But, to renew the subject, let us glance at her wealth, and what she has done to promote the national welfare.

1st. Of lands she owns 15,011,520 acres, and, besides what her citizens have paid for Spanish and French grants and school lands, they have paid into the Land Offices of the Government $17,000,000 for lands in their wild state.

2d. She has paid to Maryland, Delaware, Virginia, &c., enormous sums for the three hundred thousand negroes she owns.

3d. The capital invested in foreign and domestic commerce, city and town property, houses, canals and railroads, manufactures, banking and insurance, iron and coal mining, timber trade, steamboats and shipping, with the increased value of lands by clearing, fencing, &c., value of slaves, live stock, and money hoarded, is very large in the aggregate amount, an estimate of which I scarcely dare mention.

4th. Her liberality expends in trade with the other States a large portion of her income.

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* Allowing for each year only what it was in 1840, as per census.

† This year the Alabama shipments by this river may be some ten to fifteen thousand bags more; but for several years it has been about these figures.

‡ This is as much or more than we received from this river during that season, of Mississippi cotton, as the total receipts out of it were but 122,000 bales; for the other years they are about correct.

5th. The shipping interest is largely benefited by the freighting of her six hundred thousand bales of cotton, and the return cargoes purchased by us.

With such varied and extraordinary advantages for commerce, manufacturing, mining, ship-building, timber-getting, &c., it is not to be wondered at that Alabama is beginning to direct her attention to the advantage of diversifying her pursuits; and, under any circumstances, in time, those vast sources of wealth now reposing within her borders must become transcendently productive. The accumulation of wealth which has been going on, but which has been regularly invested in the purchase of negroes, is now being stayed from that direction, and turned toward other industrial pursuits. It is obvious, however, to every political economist that it is the interest of every interest in the country to promote the value of cotton, as, should there be a violent transition of slave labor to the pursuits above alluded to, and which is entirely practicable, a derangement of trade would ensue which would be prejudicial, to say the least of it, to the interests of other sections of the Confederacy. And when cotton sells well public lands are purchased freely, and the direct interest the government has in this matter will be readily and conveniently demonstrated by the following table, showing the number of acres of land owned by the citizens of Alabama, Mississippi, Louisiana and Arkansas, the amount paid for portions bought of the goverment, and the number of acres in each remaining unsold:

States.	Total No. of acres in	Acres owned,	Paid to Government for portion bought of it.	Acres remaining unsold, Jan. 1, 1849.
Alabama, ...	32,462,080	15,911,520	$16,888,047	17,450,560
Mississippi, ...	30,174,080	15,811,650	16,402,691	14,326,430
Louisiana, ...	29,715,840	6,263,822	4,186,394	23,452,018
Arkansas, ...	33,406,720	5,942,117	3,769,695	27,464,603
			$41,246,827	82,693,611

This table shows some extraordinary facts that are not often considered by those who abuse the South, namely, that besides the government owning 82,693,611 acres of land, which would be sooner purchased up if their agricultural productions could be promoted; these States have paid $41,246,827 for the lands they have alone purchased of the government; and if this sum had been invested at the average time of their payment, say 1835, in six per cent. stocks, payable semi-annually, and such dividends had been reinvested and compounded till now, it would reach a total sum to-day that would equal fully all the bona fide capital of the North invested in cotton factories and shipping. I allude to this to present a cause why the South may appear behind the North in the progress of her factories, &c.

Cotton factories and iron forges are, however, becoming numerous. Coal mining is attracting great attention, and from the great profits arising from investments in ships, and our wonderful facilities for building, with our splendid timber on the spot, &c., it is not unlikely we shall ere long enter the lists as competitors with our northern brethren in this exceedingly profitable branch of their wealth. In Alabama our citizens are generally exempt from embarrassment, and in certain quarters large amounts of money are known to be hoarded.

The university and colleges, the high schools and academies, in all the principal towns and cities of the State, are in the highest degree flourishing; and the great increase of the number of churches and membership, the decrease of crime and the orderly character of our citizens, manifest the spreading influences there of religion.

The increase of population of Alabama, Mississippi, and Louisiana, is rapid and steady. For example, there were in

	1820.	1830.	1840.
Alabama,	127,901	309.527	590,756
Mississippi,	75,448	136,621	375,654
Louisiana,	153,407	215,529	352,411

And in 1850, a large increase will be found.

In conclusion, I feel the utmost pleasure in announcing to the friends of progress everywhere that, amongst many of those who have violently opposed all measures for encouragement of enterprise and the increase of facilities for the development of our resources more actively and profitably, practical experience has exposed to them their serious errors, and now, in the most cordial manner, the most distinguished as well as many of the masses of their portion of the people, are uniting with the other portion in the most liberal and enlightened disposition to meet the calls of the whole people for the purposes alluded to.

Devoting my remarks to the position, &c., of the one State, I have done so because I am a citizen of it; but the gigantic importance of the whole South may be more justly estimated by a careful consideration of what is here submitted in relation to*

ALABAMA.

STATISTICS OF POPULATION AND TRADE.

1. POPULATION AS INFLUENCED BY FREEDOM.

Dr. Bennet Dowler, of New Orleans, a profound antiquarian and vital statistician, has lately prepared an interesting pamphlet, in which he shows the favorable influences of republican governments, in developing and extending *population*. Dr. Dowler has promised to continue the subject in our Review. We make some extracts from his pamphlet.

2. SPANISH AMERICAN POPULATION.

Everywhere, says Humboldt, "in the Spanish colonies, the places the first peopled are now the most desert."† This downward tendency of all the races, white, black, red and mixed, is not arrested by exuberance of food, nor by moderation, nor by scarcity, nor by the diffusion of population, nor by the concentration of population, nor by any known modification of climate, as will be seen hereafter.

Has not the monarchical principle (including under that term the hierarchy, and the miscalled republicanism of the South), retarded the development of population? A rapid survey of several countries where monarchy has prevailed in the new Continent, may prove acceptable, even if it fail to demonstrate the hypothesis under consideration. It is not intended to discuss the ecclesiastical polity of the South, so fundamentally different from that of the North.

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* National Intelligencer.

† Narrat. VII, 136.

The hierarchy, in itself, in its divine mission, is not within the pale of vital statistics, except so far as it becomes an accelerating or a retarding element in the science of population. The military despotisms, called republics, have not, practically speaking, attained to the North American representative principle, any more than the Ottoman Empire. With respect to the southern hierarchy, Humboldt says, after personal observation, "that the feeble civilization introduced by the Spanish monks pursues a retrograde course." (Nar. V, 117.)

The population of Mexico, is now less than it was three centuries ago—the white race not exceeding one million, perhaps not 800,000. Peru has less than a million[*] of all colors, and is depopulating, particularly with reference to the white race, which latter does not equal the population of Cincinnati. Lima, founded in 1534, has fewer souls than the second Municipality of New Orleans.

Bolivia and Chili, each contain but little over a million, while Buenos Ayres or the Argentine Republic, does not contain a quarter of a million, and, of the numerous republics (13), composing the Argentine Confederation, some contain only ten thousand inhabitants, three under 20,000, seven under 40,000, and none reaching one hundred thousand, except Paraguay, which has only a nominal connection with the Confederation. Mr. Macgregor mentions one of these States, Missiones, as having declined from one hundred thousand to ten thousand!

The republic of Uruguay, upon 69,000 square miles, has only 115,000 inhabitants, many of whom have estates containing from 60,000 to 200,000 cattle.[†] Central America one and a half millions, only one in twelve of whom are white. Venezuela covers 410,000, square miles, and had in 1800, according to Humboldt and Lavaysse, 900,000 inhabitants, but in 1841 the Minister of the Interior reported the number at 887,168, a decrease of nearly 13,000. The cities of Caraccas and Valencia have now about the same number of inhabitants as in 1810, the latter founded in 1555, has only 10,000.

Venezuela, upon an area of 410,000 square miles, had in 1800 only 900,000 inhabitants, but in 1841, according to the Minister of the Interior, the number had declined to 887,168. "The people of the United States," says Mr. Macgregor, "would people a thoroughly new country of equal extent and riches as Venezuela, with an equal population in less than ten years." This is one of the best wheat countries.[‡] M. Lavaysse says, that here may be seen associations of horses, in companies and armies, ranging from 500 to 1,000, regularly commanded by three or four chiefs of their number, which send out advanced scouts, placing a guard in the rear, all marching four abreast, ready to attack their enemies, as the jagaurs, and even man, upon whom they leap. Upon the Pampas of Buenos Ayres, three millions of these animals roam without owners.[§] Man, I repeat it, is alone unprogressive. The cities of Valencia, Caraccas, Truxillo, and many others, founded nearly three centuries ago, have not advanced, nay, have in many cases declined greatly in population, in modern times.

French Guiana, 22,000 square miles, had in 1834 only 22,000 souls; Dutch Guiana, 50,000 square miles, 83,000; English Guiana, 76,000 square miles, settled in 1580, population in 1847 4,000 whites, coolies and colored 94,000; Republic of Ecuador, 320,000 square miles, population in 1827 but 492,000, in 1846 only 550,000 of all races, the whites were one-fourth.

The Villa de Upata, the capital of the Missions to Santa Maria, was founded in 1762. Thirty-five years after it contained only 657 souls, and in 1803 it had increased 112. In four other towns mentioned by Humboldt, in twenty-one years ending in 1818, the population had declined one-third.

The city of Para, $1\frac{1}{2}°$ south of the equator, at the mouth of the greatest river of the world, of unknown depth, was founded 103 years before New Orleans, and had, according to Mr. Edwards, only 15,000 souls in the year 1846 (Voy. 25). Mr. E. says, this river affords from 40,000 to 50,000 miles of navigation. "The climate being peculiarly healthy, there being *no kind of epidemic;* its valley being as much superior to that of the Mississippi as the latter is to that of the Hudson." (249,250.) Brazil covers an area nearly as large as Europe—about fifty-six times larger than Louisiana—nearly twenty-three times larger than the United Kingdom of Great Britain, and possesses (as the Rev. Mr. Kidder, in his new work, asserts), "not only whatever is beautiful, whatever is luxuriant, and whatever is magnificent in nature, but it enjoys a pleasant and *salubrious climate*—a degree of healthfulness unknown, etc" (II, 387). He quotes M. Denis as showing "that the influence of the climate and scenery is peculiarly calculated to inspire sublimity of thought, and to promote the power of the imagination" (II, 397). Mr. Edwards, after personal observation, says that "the climate of that country is singularly healthy, the heat being less oppressive under the equator than in New York." The estimates of the population of Brazil differ, ranging from 2½ to 4½ millions, of all colors. The former population was far greater, without doubt. The Huguenots in 1555 attempted to colonize Brazil. Their poor success was, doubtlessly, owing to the very despotism, which they, like our more fortunate ancestors, sought to escape in the wilds of the West. I will not stop here to show that the political principle of the North was rather the cause than the effect of the liberal ecclesiastical polity which prevails, and which is now more thoroughly democratic in some of the churches than in any of the States. The political principle divorced the ecclesiastical, not the ecclesiastical the political, as an element or essential condition of the government—a divorce that has proved most beneficial. The connection of the Church and the State exerts an unfavorable influence upon the science of population, greater than famine, as the sequel may show.

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[*] Capt. Wilkes: Macgregor gives a higher estimate.

[†] Macgregor, Prog. Amer., I., 1034.

[‡] According to Humboldt, New Grenada, Buenos Ayres, and other portions of South America, yield from 3,000 to 3,200 pounds of wheat per acre—four times as much as Northern countries—the French soil yielding only from 1,000 to 1,200 pounds. (Narrative, 7 vols., London, 1814 to 1829.)

[§] Ibid.

The whole of Spanish America, North and South, including the West Indies, under the monarchy, did not probably exceed fifteen millions of souls, reckoning the white, red, black and mixed races. Of this number about one-fifth, equal to the present population of the State of New York, were whites. Balbi, and some others, estimate the entire population of the American continent at thirty-nine millions; Malte-Brun at forty-five. South of the United States, including insular America, I estimate the number at twenty millions—one-third being in Mexico; five out of twenty millions being white. The estimate is based, not upon geographies, but upon the most recent books of travel and upon the best documents. These differ, however, greatly.

Thus it appears, that in three centuries, the entire Caucasian race in both Americas, south of the United States, has not equalled numerically, that portion of the Union lying west of the Alleghany mountains, settled by the present generation amid the conflicts of prolonged savage wars with the bravest and most sanguinary nations known in all history.

The vital statistics of South America, indicate extinction, or at least decline, as the probable resultants of the monarchical and military despotisms which have prevailed, and still prevail, upon the fairest portion of the globe. Statistical writers, in Europe, struck with these astonishing facts, are beginning to speak strongly upon this subject, and boldly to declare, that the absorption of these countries by the Northern Republic, is inevitable as a political event, and desirable as a vital one. The morality of this question does not belong to vital statistics. "The Anglo-American republic," says Mr. Macgregor, in his late work on America, "will overwhelm the whole hemisphere, from Hudson's Bay to Terra del Fuego. This is no prophecy. It is a clear daylight forecast of that not-to-be-arrested progress which is the inevitable destiny of America" (I, 199).

3. CANADA—THE WEST INDIES—SLAVERY.

Canada, to which emigration is invited by rewards from the crown, and in which more immigrants are received than in any other similar community, is thus spoken of in a recent work by Messrs. Chambers of Edinburgh, a work in which a predilection in favor of British institutions, is not concealed: "In comparing Canada with the (United) States, every intelligent traveler allows, that the *citizens of the Union are infinitely more active than the subjects of Great Britain*. Within the colonial territories, all public works, and most of the settlements, proceed slowly, the *system* seeming to be rather *inert;* while on the States' side of the boundary, every species of work proceeds with the most astonishing rapidity, canals being cut, railways formed, and towns built, in an inconceivably brief space of time. As upper Canada has nearly the same natural advantages as the States, and as the people, it may be presumed, *are as well educated and as generally intelligent, it would seem that the true cause of the difference we specify is in the mode of conducting public affairs.*" Is it not the monarchical principle, in the one case, which retards, as it is the representative principle, in the other case, which accelerates the movement of the population? Do not these principles stand in the same antagonistic relations that the *vis inertia* bears to the moving forces in the material world? According to the *savans* of Edinburgh, in the new Universal Geography, the Canadas, in 1844, contained only 893,664 souls, notwithstanding the enormous vital importations to those countries for centuries.

Leaving the cold climate of Canada on the one side of the United States, for South America and the West Indies on the other, it will be found that the British possessions as well as those of other monarchical powers—I say it will be found that these colonies, abounding, nay exuberant, in all the luxuries of tropical climates, are actually decaying, or are nearly stationary, perhaps tending to extinction—a conclusion that will scarcely be deemed unwarrantable after examining the data which follow, and which are taken almost at random from many: English Guiana with an area of 76,000 square miles, settled in 1580, contained in 1847, but 4,000 whites, with coolies, blacks and mixed races, amounting to 94,000.

The British Colony called the Balize or Honduras, in America, situated between 15° 54′ and 18° 30′ N. Lat., containing 16,400 square miles, and never visited by the yellow fever,* had, by the returns of 1845, only 399 whites; the total population was 10,709.

In many of the British West India Islands, the population is either stationary or declining, particularly as it regards the black race. The following statistical memoranda are taken chiefly from the Library of Useful Knowledge, by Mr. Porter and Professors Long and Tucker, on America and the West Indies, and from Mr. Macgregor* (Lond. 1845, 1847). In St. Vincent the decrease by deaths, beyond the number replaced by births, during fourteen years ending in 1831, was 2,579, or not quite ¾ per cent. per annum. In Dominica for 9 years ending in 1826, the deaths exceeded the births 662, in a population of 17,959. The total population of all the races in Nevis, in 1788, was 10,070; in 1836 only 9250; the deaths having exceeded the births among slaves, in 14 years ending in 1831, by 213 in a population of 9602, and in three years after, by 327. In Jamaica, from 1817 to 1832, the slaves constantly declined, from 346,150 to 302,666; a decrease of 43,481, or much over one-eighth!

In St. Christopher, from 1817 to 1831, the same class decreased 344 in 20,168. Martinique, a French West Indian island, has, among the whites, free blacks and colored, 37 deaths to 29 births; among slaves, 35 deaths to 32 births. Guadaloupe (French), on December 31st, 1835, contained 31,253 free persons, and 96,323 slaves; among the former there were but 28 births for 34 deaths!

Nevis, from 1809 to 1823, was nearly stationary; the last period gives 11,000, the census of 1812 gave 10,430. Grenada had a total population in 1823 of 29,000, the slaves 25,000; in 1791 the whites 1,000, in 1823 only 900; in 1815 slaves 29,381, in 1820 only 25,677, in 1823 only 25,000. The slaves in St. Vincent, in 1817 were 25,255, in 1820 only 24,252, in 1823 only 24,000. In Dominica in 1805, the total population was 25,031, in 1823 only 20,000; slaves at the former period 22,083, at the latter 16,000; free colored, at the former 4,417, at the latter 2988. Montserrat in 1805 had 9500 slaves, in 1812 only 6,534, in 1823 only 1,500; in 1805, free, 1250, in 1812 only 442! In the Virgin Islands, in 1788, the slaves were 9,000, in 1823 only 6,000! Tobago, in 1805 had 14,883, in 1811 it had 16,897, in 1817 only 15,470, in 1820 but 14,581, and in 1823 only 14,000; from 1815 to 1823 the total population declined from 18,000 to 16,000. Trinidad, perhaps, declined less than any other island, at the period now under consideration (a period long anterior to the great emancipation act), yet the slaves in 1817 were 25,941, in 1823 only 23,500. St. Lucia contained in 1788 a total population of 20,968, in 1810 only 17,485, in 1823 only 17,000; at the former period the slaves were 17,221, at the latter 13,000. The Bahamas, in 1810, contained a total population of 16,718, in 1823 only 15,500. Thus, during this period, every British West India island exhibited a more or less rapid decay.

Hayti, French and Spanish, has shown a vital progression unknown to the

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* See Macgregor's Progress of America, Lond., 1847—a voluminous work.

British possessions. Humboldt, estimated its population at 820,000, others at a million, anterior to 1823, since which it has probably declined. Macgregor, in 1847, estimated the population at 700,000, a decline of 120,000 in 24 years; the slave population alone was estimated by Necker, in 1788, for that island, at 620,000. The other West India islands belonging to the Spanish, French and Dutch, do not differ materially from the British; Cuba is the most prosperous—but if the vast and disproportionate importation of negroes be deducted, 15,000 to 26,000 per annum, it will be seen that the principle of population is not really progressive.

The Registers of twelve English West India islands, for three years, ending in 1822, show a decline of one in 46 slaves, for that short period, that is from 617,799 to 604,444; in some other islands the decline was one in twelve in three years!

Humboldt has summed up the population of the British West indies, to the close of 1823. Total, 776,500; slaves 626,800. The total in 1788 was 528,302; in 1812, 732,176 (Colquhoun); the slaves having been 634,096, nearly the same as in 1788, notwithstanding the vast numbers introduced; for in sixteen years ending in 1786, no fewer than 610,000 were imported to that island (Bryan Edwards). Jamaica, in 1734, had 86,146 slaves, 7,644 whites; in 1800, slaves, 340,939; in 1810, slaves, 320,000; in 1812 only 319,912; in 1815 only 313,814; in 1816 but 314,038. From 1787 to 1808, the number of slaves imported to the island, in addition to the above, amounted to 188,785, altogether in 108 years 676,785 (other authorities say 850,000), and yet there exists in Jamaica not the half of that number. The whites, in 1787, numbered 28,000, in 1791 only 30,000, in 1820 only 25,000; in 1816, free colored, 45,000, in 1820 only 35,000. Barbadoes, 1823, total 100,000, slaves 79,000; in 1786 the slaves were 79,220, in 1811 only 79,132; in 1811, whites, 15,794, in 1823 only 16,000; in 1805, the free colored, 17,300, in 1823 only 5,000. Antigua, in 1823, contained 40,000 souls, 31,000 were slaves; in 1815 the slaves were 36,000, in 1820 only 31,053. Saint Christopher contained, in 1823, a total population of 23,000; slaves 19,500; the slaves in 1805 were 26,000, at which time the total population was 30,300, showing a decline of more than one-third in eighteen years. "In several of the West India islands," says Humboldt, "under the English domination, the population diminishes five or six per cent annually" (Narrative VII, 135.)

According to Humboldt, Gallatin, and others, it appears, that previous to 1786, the British had imported into their West India islands, 2,130,000 African slaves. The whole importation of that race in the United States, from first to last, was, according to Mr. Gallatin, only 300,000. Thus, the British West Indies, settled a century before North America, received more than seven times the number of slaves ever received in the United States, yet, in 1823, under British management, only 627,777 remained! More than one million and a half had disappeared! One million and a half less than the original importations! The greatest of all physiological curses is the death, or the extinguishment, of a race. This was not the fault of the negroes; they were under the control of their masters. Left to themselves they are, so far as facts can guide the inquirer, alike incapable of rational republican or monarchical government. Their experiment in St. Domingo has failed to secure the great objects of all good government. Of the free blacks of the United States, it is not necessary to speak fully, as the subject is too extensive for this paper. Impartial travelers, and statistical writers, admit that their condition, whether regarded in a social or sanitory point of view, is deplorable in the extreme. Emancipation suddenly arrests their vital progress, longevity, psychological energy and physical improvement. Their numerical increase is not inherent, but extraneous and contingent, arising from absconding and manumitted slaves. Insanity, idiotcy, pauperism,* disease, short life and speedy death, everywhere mark the downward progress of free blacks; I ought to except those of New Orleans, who are not only long lived, but healthy, wealthy, moral and progressive.

M. De Tocqueville,† a profound observer, and an opponent of slavery, says, of the slave, "if he becomes free, independence is often felt by him to be a heavier burden than slavery. The prejudices of the whites against the blacks increase in proportion as slavery is abolished. The inhabitants of the North

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[*] See the Census of the United States.

[†] Democracy in America, I, 33 ,386, 405

avoid the negroes with increasing care, in proportion as the legal barriers of separation are removed by the legislature."

The statistics of New York and of Philadelphia and of other cities where free blacks abound, show that the average mortality is more than twice as high among them as among the whites, and, I may add, slaves. Professor Lee, and Dr. Emerson, have published able papers upon this subject. The distinguished Mr. Lyell, of England, after personal observation, admits, that experience has fully proved, that *emancipation checks the increase of the black race*, and, that the increase of slaves shows that they are not in a state of discomfort, oppression and misery.

The moral bearings of this matter ought to be paramount to vital statistics, no doubt; the latter, however, is the only one now properly under review, and the result is one of the most extraordinary in the natural history of man, namely, that 300,000 Africans under republican and domestic government and management should increase in a few generations to three or four millions, presenting, at the same time a greater number of long lived, healthful persons, than any people of Europe, not excepting the most favored classes Experience shows, that up to the present time, all monarchical governments have not only failed to advance the vital condition of the negro, but they have actually contributed toward his extinction, and though the precise cause of this is not very manifest, yet, it seems that one of the essential conditions of his decline belongs to the form of government.

The Liberia experiment has been conducted not only with liberality, but with skill and energy; yet, after a trial of twenty-six years, made under the most favorable auspices, the total population of the republic of Liberia, according to the last report of the Colonization Society, was only 18,000, including the blacks sent from the United States, as well as those captured from the slave traders, and those natives of Africa who are citizens of the colony. Should this experiment in self-government prove successful, as the friends of humanity ardently desire, it will be one of the greatest achievements of the age. Millions will spring to life in the deserts of Africa.

4. THE COMMERCE OF THE LAKES.

We find in the Buffalo Commercial Advertiser, of the 29th ultimo, a series of interesting tables, setting forth the names and capacity of all the vessels now enrolled and licensed upon lakes Michigan, Huron, Superior, St. Clair, Erie, Ontario and Champlain. The Commercial thus sums up this valuable information:

NUMBER OF AMERICAN VESSELS AND TONNAGE.

95 steamers,	38,912.53 tons.	93 brigs,	21,330.27 tons.
45 propellers,	14,435.37 "	548 schooners,	71,618.22 "
5 barks,	1,465.88 "	128 sloops and scows,	5,484.25 "
		Total,	153,426.62

TOTAL TONNAGE AND VALUATION.

45,067	tons steamers,	$3,380,000
15,985	" propellers,	950,000
101,080	" sail vessels,	3,538,000

The apparent discrepancy between these tables arises from the fact that in the latter is included the British tonnage on Lake Ontario.

5. SUGAR.

From a statement of the product and consumption of sugar for the last four years, we gather the following facts:

Total growth, tons,	905,000	1,087,000	1,061,000	845,000
Stock, March 31,	121,000	87,000	143,000	130,000
Total supplies,	1,026,000	1,174,000	1,204,000	975,000
Stock, after March 31,	87,000	143,000	130,000	
Total consumption,	939,000	1,031,000	1,074,000	

Consumption in 1848, ... 1,074,000
For consumption in 1849, ... 975,000
Deficiency this year, ... 99,000

SOUTHERN INDUSTRIAL PROGRESS.

1. COTTON AND COTTON MANUFACTURES AT THE SOUTH.

COMPARATIVE COST AND PRODUCTIVENESS OF COTTON, AND THE COST AND PRODUCTIVENESS OF ITS MANUFACTURE: BY CHARLES T. JAMES.

NATIONAL WEALTH, together with its creation and accumulation, constitutes a subject on which much has been said and written; and yet there are thousands of persons, otherwise enlightened, who appear to know but little about it, or, neglecting the principles of true economy, seem to regard them as being of little or no importance. The writer does not, however, undertake, in the following pages, to portray the science of political economy, but, to give some practical hints, mostly applicable to a single branch of business, on the creation and accumulation of wealth. In passing, it may be well to remind the reader of the well known fact, that, as far as national wealth is concerned, it is made up of the wealth of individuals. He, therefore, who points out the means of accumulating wealth, shows how the wealth of communities and nations is increased. In order to confer the greatest and most lasting benefits by the creation of wealth, it is highly essential that its elements, and the proceeds of their products, should be so distributed, that while they enrich the capitalist and employer, they should furnish a fair compensation to the industrial classes, and afford them, at least, a full supply of the comforts of life. Without such a result, however rich, no *nation* can be happy, as a *people;* for, without such a result, though the nation may be rich in the aggregate, the great masses of the people may suffer all the wretchedness of penury and want. Witness, for instance, the example of Great Britain. If, in that kingdom, the fruits of capital and industry were so distributed that labor should receive a due reward, the miseries of privation never need be felt by the industrial classes. On the other hand, though the British Empire is immensely rich, the British people—that is, the masses—are miserably poor. Comparatively, the wealth is grasped in the hands of a few, while a vast majority are reduced either to absolute pauperism, or to a state closely bordering on it. To perpetuate this condition of the laboring poor, there is of the entire wealth of the kingdom, no less than $3,730,000,000 absorbed in the public debt! The interest and charges on this enormous sum, are no less than $130,000,000 per annum, to be paid by means of taxes and impost and excise duties, which are eventually, though indirectly, laid on labor itself. From that source alone the aristocracy as well as the royalty of Great Britain draw the above amount, to say nothing of much larger sums for the support of royalty, and for governmental purposes. In this way, is industry robbed of much of its reward; and of the rest, more hereafter. However desirable wealth may be, Heaven forbid that the United States should ever possess the wealth of Great Britain, if they must take her poverty and wretchedness with it.

The elements of wealth, I take to be, all that is combined for its production. They are labor, skill and materials. Wealth is the direct product of this indispensable combination—while the circulating medium, whether gold and silver or any thing else, is a convenient adjunct, to facilitate the operation. Money is not wealth, except merely as a house of delegates are the people—by representation. The moneyed man, is a man of wealth only by implication. Having nothing but money, he has no actual wealth—yet he possesses the talisman that can, not create, but command it. All the market value of money is absolutely dependent on the combined operation of labor, skill and materials. These again are valueless in themselves, each by itself; and their value is enstamped on them by means of their combined operation and product; and the latter being valuable only as calculated to supply the wants of mankind, to satisfy their appetites, and to cancel their wishes. The metals are valueless, as truly as the refuse of their ores, without labor and skill to reduce them to desired forms. So would be the labor and skill without the material. So, also, would be the product of the combination, unless adapted to the wants or desires of man. This is all the value of any thing, in a commercial sense. From these plain and simple facts, we learn: First—that labor, skill and materials, are the elements of wealth, and which latter consists of the combined product of the three former:

Second—that that only can assume the character of wealth, which can be applied to some definite purpose for the use of mankind: Third—that money is valuable only as the representative of wealth—as the medium of exchange by which business transactions are facilitated, and the creation and accumulation of wealth accelerated. In these senses alone is it useful or valuable.

For instance—A. has materials for a hat, but he cannot work them into the desired form. To remain in his hands, they would be valueless. But B. purchases the materials, for which he pays four dollars; and thus enables A. to purchase a pair of boots. B. fashions the materials into a hat, which he does not want. C., however, wants it, and pays B. six dollars for it. Here, then, is wealth created to the amount of six dollars, by the labor, skill and materials of A. and B. Its value to B. is six dollars, because with that money he can purchase a barrel of flour, and which flour he wants. It is worth the same to C., because he wants the hat more than he wants six dollars. Yet, the whole would have remained valueless, without the labor and skill of B., and without the several wants of A., B. and C. And the money exchanged between them would have been useles and valueless, unless each could have purchased with it what he wanted. This is the use of money, and this use alone stamps it with value. It is this which makes it, not essentially one of the elements of wealth, but a means by which the combination of those elements is more readily brought about, its operations facilitated, and its products more rapidly enhanced. From these simple and well known truisms, we arrive at a deduction equally simple and true, that where the elements of wealth, together with their handmaid, capital, are most equally and judiciously distributed and combined, their operation will be most effective, and most subserve public and individual good.

The entire amount of wealth embodied in any quantity of boots and shoes, though a pile as large as the Alleghany mountains, would be no greater than that in a few pairs actually wanted for use; and all the balance would be so much waste of time and materials. So of every other article. To command a price and a profit, the public want must be the limit of production. From this rule, it does not necessarily follow that the productions of a country should be limited to the demand at home. One country may produce more of an article than its wants demand, and another may produce less. The latter country may produce more of another article than it can consume, and of which there is a deficiency in the former. Now, if each of these two countries can produce the article of which it has a deficiency, at a less cost than it can be purchased of the other, then there is a mutual loss, and so a loss to either, if such be the case with either, and vice versa. One country produces a raw material for manufactures. After using at home all that can be used to a profit, and there being no object for a profitable application of the redundant labor, then it is good economy to continue the production of the article, in the quantity equivalent to the foreign demand. But when the supply may extend beyond that limit, it should be curtailed; because an over supply always gives the purchaser the advantage in the market, when the profit of manufacturing at home, is greater than that of producing it. Take the case of an individual farmer, if you please, to illustrate this position. A. raises one thousand bushels of corn in a year; and, wanting but five hundred bushels for his own consumption, he sells five hundred to B. But B. raises one thousand bushels of wheat, and requiring but five hundred for himself, sells the other five hundred to A. Now, if A. makes ten cents per bushel on his corn, and B. makes twenty cents per bushel on his wheat, it is evident that B. has the advantage, by fifty dollars. It is equally evident, that if A. can raise wheat at the same cost B. can, he should curtail his crop of corn, and grow his own wheat. The same rule holds good of communities, states or nations.

Suppose, again—B. has flouring mills. A neighboring community furnishes a full supply of wheat for them. B. converts this wheat into flour, and sells it to that community, at a net profit of twenty per cent. If that community have equal facilities with B. to erect and operate flouring mills, and can still raise all the wheat they want, is it not perfectly evident that it would be much to their interest to manufacture it at home?

If, again, the people of the United States should ship all their wheat to Europe to be manufactured into flour, and then purchase it back again at an advance of one hundred per cent. on its original price; that would be considered a bad speculation and a great sacrifice of wealth; provided the people of this country could manufacture their wheat at a less cost, and especially if they employed the requisite labor, skill and capital, in some pursuit far less productive. A like mode of procedure, with any other product, is equally impolitic. If, by the same amount of outlay of labor, skill and capital, a greater amount of wealth can be created by the manufacture of a raw material than by its production, common sense decides at once, that none should be sent abroad which can be manufactured at home. A yankee farmer would be considered rather a *verdant* specimen of his race, who should transport his corn twenty miles, and sell it to another person to convert it into pork at a profit of fifty per cent., when he could just as well do that at home himself, and had nothing else to do by which to earn one half the money. Yet, something like this, do our cotton growers and capitalists of the South.

The proper distribution and application of the elements of wealth are important to the creation of any amount of wealth, however small. A. is a person of inventive genius. He constructs a machine, curious indeed, which excites the wonder and admiration of the beholder; but it is applicable to no useful purpose whatever. Here is a misapplication of the elements of wealth. Their product is stamped with no value. B. can sell but one thousand pairs of boots. Yet he manufactures ten thousand pairs. Nine thousand, no one wants. They are without value. Here, the elements of wealth are misapplied, besides not being properly distributed.

Had A. applied his labor, skill and materials, to the construction of a machine to serve some useful purpose, and had those combined by B., in the nine thousand extra pairs of boots, been appropriated to a similar object, both would have been benefited, wealth would have been created, and public good promoted by their operations. As it is, there is a dead loss to themselves, and the products benefit no one. In fact, they have destroyed even the value of the materials, and suffered the loss of all the labor.

A bale of cotton weighs, say, four hundred pounds. On the plantation it is worth, say, twenty dollars. It is the demand for the article alone which imparts that value to it. Thus, this bail of cotton is the representative of that amount of wealth, created by labor, skill and materials. On its way to the market, on its voyage across the Atlantic, and on its passage to the storehouse of the manufacturer, its value increases at every step, by the expenditures which attend its removal. All this value, thus increased, depends eventually on the usefulness of the purpose to which the article is to be applied. Finally, its market value is again very much increased by its conversion into cloth, &c., the object of its growth. Thus, through all its various stages, from the planting of the seed to the sale of the manufactured goods, its value has been constantly on the increase, by means of labor, skill and materials, aided by the magic powers of wealth or capital previously created by similar means. The seed, labor and skill, as far as cotton is concerned, would have been worthless without the land. The cotton would have been worthless without conveyance to market. There it would have been worthless without labor and skill for its manufacture. Converted into cloth, it would have been worthless, but for the demand for the article to serve a useful purpose. All these combined, have created an amount of wealth equivalent to the full market value of the finished article, less the materials used in the process, other than cotton.

The market value of an article will, at all times, bear some relation to the demand for it, and its price will fluctuate, as the supply may be comparatively great or small. Hence, it does not follow that because a single bale of cotton may be productive of profit to its producer, every man may grow cotton to any amount he chooses, with a similar result. The demand for any article—that is, a demand that will ensure a profit to the producer—must ever, as a general rule, by the general laws of trade, be limited by the actual wants of the consumer. All excess beyond this, as a general rule, will inevitably reduce prices in nearly the same ratio; and it will usually be found that, in the long run, all that has been expended in the production of that excess, is virtually lost to the producer; that is, if the over-supply is continued for a long time. Nothing is exempt from this rule. Even gold and silver are subject to it; and each great and permanent increase of these metals, reduces their permanent value in a corresponding ratio. Even temporary fluctuations in the amount of the circulating medium, are as distinctly marked by the rise and fall of interest in the transactions between lenders and borrowers, as the fluctuations in the prices of agricultural crops, in the event of a remarkable short crop being succeeded by one extremely abundant. The true method then is, so nicely to balance the distribution and application of the elements of wealth, that demand and supply shall be as nearly reciprocal as possible.

To do this exactly, is, no doubt, impossible; but it should be done as far as practicable, in order to render business productive of wealth.

2. ACTUAL EXPENDITURES OF A COTTON MANUFACTORY IN MISSISSIPPI OF $30,000 CAPITAL.

After the elaborate article which we gave in our paper of the 2d inst., on the subject of cotton manufactures, we do not think there is any necessity, at present, for further comment. We have not yet, however, furnished our readers with the very important information of the expenses of a cotton manufactory. We are now enabled to do this satisfactorily. The following estimate, furnished by H. Hilzheim, Esq., a merchant of our city who has given the subject more than ordinary attention, may be relied upon:

9 men, 75 cents per day, ...	$6	75
20 boys, 40 " "	8	00
26 girls, 50 " "	13	00
1 spinner, ...	2	00
1 weaver, ...	2	00
1 superintendent, ...	3	75
1 fireman, ...	1	00
1 watchman, ...	0	75
4 cords of wood, $1.75 per cord,	7	00
1½ gallons oil, 1.25 per gal.,	1	87
Incidental expenses, ...	1	00
Two men for different work, $1.50, ...	3	00
1155 lbs. cotton, 6 cents, ...	69	30
300 lbs. wool, 18 cents, ...	54	00
Loss in wasted, ...	8	00
Interest on $30,000, 8 per cent.,	6	67
Insur. on do. 2 per cent.,	1	67

Board for 45 hands, negroes 20 cts.		$9 00
" 7 " whites 30 cts.		2 10
		$200 86
2161 yds. 4-4 osnaburgs, 9c.	$194 40	
300 yds. 4-4 Linseys, 25c.	75 00	
		$269 40
Net profit per day, ...		68 54
313 working days at a cost of $200 86 per day, ...		$62,869 18
676,08 yds. osnaburgs, per year, at 9 c.,	$60,847 20	
93,900 yds. linseys, per year, at 25 c.,	23,475 00	
		84,322 20
Net profit per year,		$21,453 02

By this estimate the net profit upon the capital invested would be about *sixty five per cent*. We must take into consideration, also, the additional advantage to the town of the expenditures of the operatives. The whole amount of the sum for expenses in the above estimate will be spent in the city of Jackson.

Mississippian.

3. COST OF COTTON MACHINERY.

We lay before our readers the actual cost of cotton machinery, capable of turning out 2160 yards of lowels and 300 yards of linseys per day. Estimating the lowels at ten cents per yard, and the linseys at thirty cents per yard, the total revenue per day would be $306, or about $92,000 per annum.

1 willow, ...	$70
1 Whilin's lapper, 3 beaters, ...	450
21 cards, 30 inch cylinders, $145,.	3045
2 drawing frames, ...	375
3 speeders, $250, ...	720
1 grinding machine, $80, ...	80
1 turning machine, ...	70
2 wool cards, $350, ...	700
1 wool picker, ...	75
1 Burr machine	75
1 mule, ...	200
10 throstles, 144 spindles, $350,.	5040
2 reels, $40, ...	80

1 yarn press, ...	$40
2 Warpers, $75, ...	150
1 spooler, ...	102
2 dressers, $400, ...	800
40 looms, $60, ...	2400
23 set card clothing, $50, ...	1150
80 set harness 80 reeds, ...	205
6000 bobbins, ...	180
200 spools, ...	60
1 turning lathe, ...	450
1 engine, ...	2500
Total cost, ...	$19,047

4. GEORGIA AS SHE IS.

We believe the people of Georgia are by no means lacking in an honest and just State pride—a consciousness that in all that renders a State prosperous and great, their own is, to say the least, not behind her sisters. But will the reader pardon us, when we intimate an opinion that the error of our people, in connection with this topic, is an over-modesty—a disrelish to make their own greatness, as a people, the theme of their conversation, however conscious of the actual fact. We are by no means joking in these remarks. Georgia has suffered in the estimation of her sister States, and of the world, from the mere fact that while others make their States renowned by their constant exposure of them, as cities set on hills, the people of Georgia, on the contrary, would seem to prefer rather to put her light under a bushel, so that others could neither see nor appreciate her wonderful advantages and immunities as a people. Look at the reputation which other States have actually acquired upon Georgia enterprise and Georgia improvements. And we do not blame them for doing so. This thing of considering one's State, and claiming for one's State, all that is enviable, ay, even far beyond any body else's State, is not excusable alone, it is positively praiseworthy. If one can't boast of his own home, he need hardly expect others to boast for him. And whether real or otherwise, with the bulk of the world this boasting passes as reality, and the State reaps the benefit in her reputation abroad, and, we may add, in the respect and love of her own people at home.

Well, if any southern State, ay, or northern either, has just cause to boast of their homes, surely Georgians may rightfully boast of theirs. She makes more cotton and corn—has more railroads—more manufactories—more flourishing towns—more shipping (possibly with the exception of New Orleans)—pays less taxes—has more schools and more scholars—has more diversified mineral wealth, from iron to gold inclusive—she is dotting the country with the finest flour mills—she is nearly ready to furnish her own citizens and the people of other States with flour to eat, with cloth to wear, with iron to work, with lime and marble to build, and to fertilize—she is dispensing with the industry of other States, by making her own industry furnish her supplies, luxuries and all, from apples and onions, sugar and molasses, to beef and pork, and all else that is good inclusive—she has a smaller public debt—a finer climate, or climates (for she has them by the assortment)—as good a government—as wholesome laws—as perfect a judiciary—as thriving a population—and is more rapid in her onward progress toward the full developement of her extraordinary resources, than most (may we not brag a little while on this topic, and say, than any) of her sisters of the South. Why shall we not boast of Georgia? She is worthy of all the commendations her people can bestow upon her. She is a most generous mother; and he is but a churlish son, who does not think her better, and love her more, "than every land beside."

We have been led to the foregoing reflections, by noticing of late, in various quarters abroad, kindly and complimentary references to our honored old commonwealth, by those who seem to have just woke up to the rapid march of Georgia improvement, and the undoubted fact of Georgia greatness. We are thankful for every kindly tribute; and promise, in return, that Georgia shall be the exemplar State of the South, to point her sisters to what they can do, and what, at least in their degree, they may become, through the spirit of enterprise, under the guidance of sound counsels.

5. MANUFACTURES—NASHVILLE, TENNESSEE.

Nashville, February 27, 1849.

J. D. B. De Bow, Esq., New Orleans: From a correspondence which we held during the summer of '47 (you in New York and I in Boston), I infer that some account of the cotton manufactories of Tennessee will not be unacceptable to you. I inclose a short and hurried letter, written by me to a friend who desired for another such information.

Tennessee is completely aroused to the importance of diverting a portion of her surplus labor to manufacturing, and will soon become prominent in that way. The truth is, owing to the low price of provisions and labor, and abundance of fuel, with the raw material right at our doors, we can make coarse cotton and woolen goods *cheaper* than they can be made *elsewhere*.

Very respectfully, Sam'l D. Morgan.

Nashville, February 13, 1849.

V. K. Stevenson, Esq.—*Dear Sir:* In answer to your note of this date, asking me to furnish to you (for the use of a friend who desires it) such information as I may possess, with regard to the cotton manufactories of this State, I have to remark, that the knowledge which I possess extends only to those establishments situated within the "middle division" of the State; and even that is too superficial to be entitled to much consideration.

There are probably now in operation within the bounds of "Middle Tennessee," some twenty different mills for the manufacturing of yarns and cloths. From the best data I have at command, I estimate the number of spindles in operation at not less than 18 or 20,000. There are but few of these mills which as yet are making cloths, though several more, I understand, are preparing to do so. The article manufactured consists chiefly of cotton yarns, varying in sizes from number 3 or 4 to number 13 or 14. Some two or three of them also manufacture a heavy article of wool and cotton goods, used for negro clothing.

In addition to the mills alluded to, there is now being erected, and very near its completion, another one at Lebanon, 30 miles distant from Nashville, and which, in point of construction and machinery, is believed to be *fully equal to any one in America of its size*—the buildings all being of the best material, and on the most approved plans—fire-proof throughout. The engines for propelling it, as well as its operative machinery, embrace all the latest American and European improvements. The buildings (which are in greater part four stories high) cover an area of very nearly or quite three-fourths of an acre. When finished it is designed to contain 6,000 cotton and 2,000 woolen spindles, and 240 looms, capable of producing from seven to eight thousand yards of cloth daily; and as the goods which it is intended to produce will be of the heaviest description, the quantity of cotton which it will require for a year's operation will be about 2,500 or 3,000 bales, with a proportionate amount of wool. So you will perceive that within a short time there will be in operation, in this division of the State, certainly not less than 25,000 spindles; and as these spindles will all be engaged in producing the very heaviest description of yarns, the entire amount of cotton required for them will not be short of 8,000 bales.

In the eastern, and also in the western, division of the State, there are many other small mills, of which I know too little to enable me to give to you, for your friend, any information of a character sufficiently reliable to make it valuable to him. I hesitate not, however, to assert that, together, the two other divisions possess not less than 10,000 spindles, and consequently increase the quantity of cotton manufactured annually to not less than 12,000 bales in all—more likely exceeding than falling under this number.

As to the names of the different mills, their owners, and the post-offices nearest to them, I regret that I am unable to give them to your friend with that degree of accuracy which I would otherwise be pleased to do. The inclosed memorandum will give you all the information I possess at present, on this branch of the subject—remarking, that I do not submit it to you as being anything more than a mere approximation to the number of spindles operated in each mill—with, however, the further remark, that I am satisfied that I have not over-estimated them in the aggregate. In great haste, your ob't serv't,

S. D. Morgan.

P. S.—You will observe that in the list of mills I have included two which are barely beyond the boundary of Tennessee—in North Alabama. I have included them because a large proportion of their manufactures are consumed in this State; and one of them, at least, is more intimately connected with Tennessee than with Alabama.

SOUTHERN AND WESTERN STATISTICS, ETC.

1. TRADE AND COMMERCE OF ST. LOUIS.

In the closing number of the last volume of our Review, we gave the most elaborate and full statistics of the great and growing commerce of New Orleans, in every department. We give with equal interest and care now, the statistics of another vast and growing western city, St. Louis, which we obtain from a pamphlet from the pen of Mr. Chambers of that city, the able editor of the Missouri Republican.

Imports into St. Louis, for the years 1844, 1845, 1846, 1847 *and* 1848, *commencing January* 1*st and ending December* 31*st.*

	1848.	1847.	1846.	1845.	1844.
Apples, green, bbls.....	12,628	2,128	3,728	6,314	7,233
Beef, tierces...........	9,369	5,735			
“ bbls..............	7,866	4,720	1,716	5,264	4,280
“ half bbls.........	87		169	99	63
Bacon, casks...........	25,820	14,425	11,803	6,180	19,225
“ hhds...........	3,603				
“ bbls...........	2,847				
“ box............	3,775	1,289	618	149	484
Butter, hhds...........	66				
“ bbls............	2,200	1,084	823	558	618
“ kegs and jars...	8,131	4,199	3,940	3,420	3,099
Brooms, dozen..........	6,744				
Beeswax, bbls..........	300	759	476	319	337
“ boxes and sks.	430	798	646	631	837
Bagging, pcs...........	1,084	1,442	3,243	4,217	3,120
Beans, hhds...........	79				
“ bbls............	3,258	5,337	4,370	2,091	1,518
“ sks.............	2,003	4,134	2,109	1,320	389
Bran, tons.............	30				
“ sacks...........	63,726				
Barley, bushels........	111,003	114,680	20,277	32,231	8,478
Buffalo robes, packs....	15,188				
“ “ loose....	2,227	7,782	16,717	14,475	33,670
Corn, bushels..........	699,693	1,016,318	688,649	107,927	56,720
Castings, tons.........	428	1,764	1,604	1,590	937
Cheese, casks..........	84	236	430	221	550
“ boxes..........	8,333	12,150	11,232	8,822	9,337
Cider, bbls............	1,180	336	421	763	550
Coffee, sacks..........	78,842	77,767	65,128	46,204	38,721
Cotton yarns, pks......	11,480	12,762	13,260	10,756	5,354
Flour, bbls............	387,314	328,568	220,457	139,282	88,881
“ half bbls........	541	686	1,059	563	530
Furs, packages.........	1,194	2,148	3,011	2,535	973
Feathers, sacks........	856	384	768	816	471
Flaxseed, bbls.........	4,908	4,992	3,693	2,136	2,741
“ sacks........	7,349				
Ginseng, bbls..........	119	14	19	20	75
“ sacks........	33	253	58	34	63
Glass, boxes...........	19,834	18,722	24,630	23,563	4,697
Hemp, bales............	47,270	72,222	33,853	30,997	59,292
Hides..................	62,097	71,877	63,396	70,102	55,572
Iron, bar, ton.........	6,341½	15,070	2,484	2,282	1,981
“ pig, “	4,463	2,729	2,326	1,480	1,469
Lead, pigs............	705,718	746,128	730,829	750,877	595,012
“ bar, lbs.........			7,621	88,650	19,300
Lard, bbls.............	67,339	32,021	26,462	7,652	12,293
“ kegs.......	14,180	8,595	14,730	6,659	12,999
“ tierces..........	6,579	150			
Whisky, bbls..........	29,758	22,239	29,882	29,788	24,510
Brandy, “	3,333	1,116	1,698	1,886	1,477
Wine, “	7,177	2,611	3,690	3,084	2,525
Malt liquors...........	4,282				
Lead, wh.—kegs.......	2,247	5,256	3,466	1,526	1,973
Molasses, bbls.........	21,948	21,554	14,996	11,788	3,270
Nails, kegs............	49,596	22,589	28,073	21,587	23,703
Oils, linseed, bbls......	1,609	485	826	695	140
“ Castor, “	510	332	95	78	106
“ Lard, “	493	478	292	284	867

Onions, bbls	873	1,580	463	218	1,449
" sacks	9,931	2,672	4,752	1,893	2,357
Oakum, bales	816	1,072	1,378	1,104	681
Oats, bushels	243,700	202,365	95,612	16,112	16,480
Pork, bbls	97,662	43,314	48,981	15,702	29,945
" half bbls	1,923	288	39	89	73
" bulk, lbs	8,854,000	285,797	630,765	261,754	136,333
Potatoes, bbls	2,424	2,852	3,625	2,449	3,915
" sks	72,214	24,076	26,979	12,045	21,272
Peltries, pkgs	1,880	2,697	1,266	917	540
Rice, tcs	948	762	916	869	670
" bbls				34	103
Rye, bushels	9,075	7,566	5,283	3,054	61
Rope, h'p c'ls	12,633	10,798	5,123	8,890	12,525
Shot, kegs	323		28	462	174
" bags		88	1,026	2,112	88
Salt, bbls	38,800	44,380	58,948	21,157	27,736
" sacks	204,744	106,392	177,724	112,684	124,234
Sugar, hhds	26,116	12,671	11,603	10,259	9,070
" bbls	7,946	4,083	4,400	3,721	1,912
" Havana, boxes	6,866	15,028	1,352	516	1,630
Tallow, casks	398	112	303	75	32
" bbls	797	2,217	1,114	688	810
Tar, bbls	5,027	2,217	1,558	1,630	528
" kegs	2,360	5,656	5,776	4,128	2,011
Tobacco, hhds	9,044	11,015	8,588	11,564	9,707
" man. bxs	5,446	6,548	7,903	7,777	7,380
Tea, chests	2,384	3,028	3,049	2,086	1,800
Vinegar, bbls	606	1,233	1,086	1,032	1,373
Wheat, bushels	2,194,789	2,432.377	1,838,926	971,025	720,663

AVERAGE RECEIPTS.

Below we annex a table showing the aggregate receipts of twenty of the leading articles of produce for the past five years:

Tobacco,	49,918 hhds., 36,024 boxes.
Hemp,	253,634 bales.
Lead,	3,528,566 pigs.
Flour,	1,164,502 bbls., 3,379 half bbls.
Wheat,	8,157,780 bushels.
Oats,	574,269 "
Barley,	286,669 "
Rye,	25,039 "
Corn,	2,569,302 "
Beans,	16,574 bbls., 10,045 sacks.
Beef,	15,124 tcs., 23,836 bbls., 418 half bbls.
Pork,	235,644 bbls., 2,361 half bbls., 9,772,649 lbs.
Bacon,	80,846 casks, 9,064 bbls. and boxes.
Lard,	145,949 bbls., 57,364 kegs, 6,733 tierces.
Tallow,	920 casks, 5,624 bbls.
Butter,	66 hhds., 5,283 bbls., 22,789 kegs and jars.
Whisky,	136 177 bbls.
Hay,	12,964 bales.
Bagging,	13,036 pieces.
Bale rope,	49,688 coils.

Estimated value of thirty of the leading articles of Produce received at the port of St. Louis, from the 1st of January to the 31st of December, 1848.

Articles and aggregate amount.		Average rate.	Estimated val.
Tobacco, leaf, hhds	9,044	$45 00 per hhd.	$406,980 00
" manufactured, boxes	5,446	13 20 per box.	71,887 00
Hemp, tons	9,454	85 00 per ton.	802,590 00
Lead, tons	24,200	74 00 per ton.	1,790,800 00
Flour, bbls	387,584	4 25 per bbl.	1,637,232 00
Wheat, bushels	2,194,789	70 per bush.	1,526,352 30
Corn, "	699,693	28 per bush.	195,914 04
Oats, "	243,700	21 per bush.	51,177 00
Barley, "	111,003	38 per bush.	42,181 14
Rye, "	9,075	35 per bush.	3,176 25
Beans, "	14,196	40 per bush.	5,678 40
Beef, tierces	9,369	8 50 per tierce.	79,636 50

Beef, barrels,	7,866	6 50 per bbl.	51,129 00
" half barrels	87	3 28 per hf. bbl.	282 75
Pork, tierces	1,074	10 00 per tierce.	10,740 00
" bbls	96,618	7 50 per bbl.	724,635 00
" half bbls	1,923	3 75 per hf. bl.	7,136 25
" lbs. bulk	8,454,000	2½ per lb.	211,250 00
Lard, tierces	6,579	17 50 per tierce.	113,132 50
" bbls	67,329	13 50 per bbl.	908,941 50
" kegs	14,180	3 50 per keg.	49,630 00
Bacon, casks	25,820	28 00 per cask.	722,960 00
" hhds	3,603	38 50 per hhd.	138,515 50
" bbls	2,847	7 00 per bbl.	19,929 00
" boxes	3,775	14 00 per box.	52,858 00
Whisky, bbls	29,758	6 80 per bbl.	201,454 40
Tallow, lbs	483,920	6½ per lb.	31,454 80
Butter, lbs	1,106,240	9 per lb.	99,561 60
Bale rope, coils	12,633	7 25 per coil.	91,589 25
Bagging, pieces	1,084	14 00 per piece.	15,176 00
Potatoes, bushels	157,697	30 per bush.	47,309 10
Onions, bushels	22,481	35 per bush.	7,868 35
Grease, lbs	201,350	3½ per lb.	7,092 25
Hides, green	10,458	1 50 each.	15,687 00
" dry	51,639	1 62 each.	82,655 18
Hay, tons	845	12 00 per ton,	10,144 00
Flaxseed, bushels	32,460	80 per bush.	25,968 00
Feathers, lbs	51,360	20 per lb,	10,272 00
Brooms, dozen	6,713	1 25 per doz.	8,391 25
Dried fruit, bushels	47,605	85 per bush.	40,464 25
Green fruit, bbls	12,628	1 50 per bbl.	18,792 00
Wool, bales	904	22 50 per bale.	20,330 00

Total estimated value,..............$10,358,946 56

Our import tables show that the reception of at least twenty articles of produce not enumerated in this calculation, and whose aggregate value we should place at near *three millions*, thereby making, according to the best information we have upon the subject, the entire produce trade of this city, during the year 1848, worth, at the lowest possible estimate, *thirteen millions of dollars*.

SHIPPING, TONNAGE, ETC.

The shipping or carrying trade of a city, we presume, may be received as an evidence of her commercial importance, and when viewed in this light, the position of St. Louis is truly gratifying to all who feel an interest in her growth and prosperity. The whole number of steamers engaged in carrying on the trade and commerce of our city during the past year was 263, with an aggregate tonnage of 61,390 tons, against 274 steamers, with a tonnage of 60,094 tons during 1847; showing a decrease of eleven boats, but an increase in the amount of tonnage to the extent of 1,296 tons, and although these figures show a slight falling off in the number of vessels, nevertheless there has been a very material addition in the aggregate amount of tonnage employed, and the discrepancy is easily accounted for, by the fact that the boats employed in the trade during the past year were larger, and more permanent than formerly, and there were fewer transient ones of small class from the Ohio river and other sections. This remark will apply particularly to the Illinois river trade, which heretofore received a large number of transient light draught traders during a low stage of water from Pittsburgh and other points on the Ohio. In addition to the 263 steamers employed in 1848, there were sixty-eight barges, with an aggregate tonnage of 4,641 tons; also, there arrived at the wharf 349 keels and flats, whose tonnage, at a very low estimate, would swell the total amount employed in the carrying trade of this city for the year 1848, to upward of 75,000 tons. Annexed will be found a table, which shows the monthly arrival of steamers at this port, and where from, during the past three years:

COMPARATIVE ARRIVALS OF STEAM BOATS AT THE PORT OF ST. LOUIS,

From New Orleans, Cairo, the Ohio, Upper Mississippi, Illinois and Missouri Rivers, and all other points during the years 1846, 1847 *and* 1848.

	New Orleans.			Ohio.			Illinois.		
	1846,	1847,	1848.	1846,	1847,	1848.	1846,	1847,	1848.
January,.............	15	22	29	8	8	11	3	9	26
February,.............	33	15	26	26	16	12	42	8	33
March,...............	25	48	53	26	28	38	40	85	72
April,...............	27	77	47	35	41	43	44	91	67
May,.................	59	93	22	65	61	37	80	106	82
June,................	36	49	30	52	37	44	51	60	53
July,................	23	67	30	30	41	48	32	58	55
August,..............	32	24	26	44	37	55	32	41	71
September,...........	30	28	48	37	30	42	15	45	64
October,.............	32	22	51	48	67	43	41	57	70
November,............	34	32	49	24	42	48	30	60	63
December,............	49	23	35	27	22	8	36	38	34
Total,...........	395	502	426	420	430	429	446	658	690

	Upper Mississippi.			Missouri.			Cairo.			Other points.		
	1846,	1847,	1848.	1846,	1847,	1848.	1846,	1847,	1848.	1846,	1847,	1848.
January,.......	5	4	24	7	—	1	—	11	13	15	5	16
February,......	31	8	20	1	1	1	—	10	9	21	6	13
March,.........	36	41	48	10	14	19	—	3	16	21	13	29
April,.........	55	74	76	20	32	33	—	1	18	14	12	14
May,...........	115	128	67	43	63	38	—	19	7	10	20	36
June,..........	98	91	75	47	48	39	—	8	13	11	13	16
July,..........	60	81	51	32	45	34	—	19	5	16	19	28
August,........	56	51	75	29	32	40	—	10	16	18	24	27
September,....	46	57	66	27	23	39	—	18	21	16	28	64
October,......	61	80	82	18	31	36	—	18	32	37	34	72
November,....	56	69	66	14	16	42	—	13	16	27	18	38
December,....	44	33	47	8	9	5	—	16	28	26	12	43
Total,....	663	717	697	256	314	327	—	146	194	232	202	396

Remarking upon the whole, Mr. Chambers says:

"St. Louis, from her position, is destined to be the termini of all the main railroads leading from the Atlantic cities to the valley of the Mississippi. Already efforts are making to push railroads from Boston, New York, Philadelphia, Baltimore and Charleston, to this point. The contemplated railroad from Mobile to the mouth of the Ohio, is urged on account of its anticipated connection with this city. The nation, with an unanimity seldom equalled on such a subject, accord to St. Louis the starting point of a National Road to St. Francisco, on the coast of the Pacific. The demonstrations made in various sections of the country, by public meetings, private efforts, and recent movements in Congress, give an assurance that the construction of a railroad to the Pacific will be undertaken by the nation and accomplished in a few years.

"In regard to matters of a more local nature, we have but little to say. Our city is rapidly improving in wealth and importance, even beyond the expectations of the most sanguine. Manufactories and machine shops are daily springing up in our midst, and many articles hitherto imported for domestic purposes have now become important items of export. The value and quantity of manufactured articles annually imported from the Ohio, are rapidly diminishing, and we look forward with a great degree of certainty to the time, and that at no very distant day, when St. Louis will not only prove the great commercial emporium of the Mississippi Valley, but also the machine shop of the entire West. Her facilities for the manufacture of many imported articles, are even now greater than the cities from whence they come; and it is only necessary for our manufacturing resources to be properly developed, to bring capitalists and mechanics hither, where their money and labor can be employed with certainty and profit.

" In 1840, with the exception of several flouring and saw mills, of inconsiderable note, we were entirely destitute of manufactories; and even at a later date, our establishments in this respect were scarcely worthy of attention. Since, however, cotton, woolen, soap, candles, starch and various other manufactories, have sprung into existence, and are now driving a lucrative and extensive business—to say nothing of the foundries (about eighteen in number), flouring mills, machine shops, &c., with which the city abounds. Our population in 1830 was estimated at 6,694; in 1840, at 16,469; and by the late State census, at 56,000.

The State census was taken under circumstances which did not permit of precision or accuracy. Subsequently the census was taken by authority of the city council, and by that we now have evidence of the inaccuracy of the previous State returns. By the returns of the city officers, taken for the 1st day of January, 1849, we have a population of 63,471. Even this is believed to be short of the fact, for there are many of our citizens who look upon all inquiries by those who take the census, as intended for purposes of taxation. But taking the statements as made by the city officers, they show an increase in our population unsurpassed by any city in the West. The increase of the past, we believe, will not be equal to the incoming year.

We give a table of the population of the city, by wards, for the last three census:

	1845.	1847.	1849.
First Ward,......................	6,866	9,970	9,972
Second "	6,566	7,615	10,193
Third "	4,683	5,744	10,232
Fourth "	5,321	6,354	9,221
Fifth "	6,225	6,667	10,933
Sixth "	6,574	11,453	12,920
Total,..................	36,265	47,833	63,471

LOSS OF WESTERN STEAMBOATS.

From the Pamphlet of Mr. Chambers of St. Louis, we extract:

Steamboats destroyed on the Western Waters during 1848.—The following list, which we have compiled with great care, and from the most reliable sources of information within our reach, will show the number of Steamboats destroyed on the Western Waters during the year 1848.

Name of Boat.	*How destroyed.*	*When.*	*Where.*
Avalanche,	Burnt,	March,	St. Louis.
Admiral,	Sunk,	January,	Lower Mississippi.
Amulet,	"	"	Arkansas river.
Alert,	"	April,	" "
Amelia,	"	July,	Red river.
Anglo Saxon,	"	February,	St. Mary's Landing.
Algoma,*	"	April,	Missouri river.
Batesville,	"	June,	Arkansas river.
Belle Hatchee,	"	August,	" "
Brunswick,	"	October,	Lower Mississippi.
Beardstown,*	"	January,	Illinois river.
Blue Ridge,	Burst Boiler,	June,	Lower Mississippi.
Ben Rush,	Burnt,	"	Pittsburgh.
Clarksville,	"	May,	Lower Mississippi.
Caledonia,	Sunk,	January,	" "
Champlain,	"	March,	Sublette's Landing.

NOTE.—Those marked thus (*) have since been raised and repaired. From the above, it will be seen that the whole number of Steamboats destroyed on the Western Waters during the past year, sum up fifty-nine; of this number, three burst their boilers and blew up, nineteen were burnt, and the residue, thirty-seven, were sunk. In addition to the above, a large number of minor accidents, involving but small loss of property, have occurred during the year of which we have kept no data. As regards loss of life in the above fifty-nine casualties, we estimate it at one hundred and thirty, and including all other accidents as far as can be ascertained, two hundred and forty-five souls. The loss of property we have no means of ascertaining, but at the very low estimate of ten thousand dollars in each case, the aggregate loss would sum up to $590,000, independent of the loss of life and personal effects.

Name of Boat.	*How destroyed.*	*When.*	*Where.*
Cora,*	Sunk,	August,	Missouri river.
Charter Oak,	Burnt,	April,	Bailey's Landing.
C. Conner,	Sunk,	June,	Lower Mississippi.
Car of Commerce,	"	November,	Louisville.
Confidence,*	"	September,	Hamburgh.
Circassian,	Burnt,	February,	Cincinnati.
Defiance,	Sunk,	"	Liberty.
De Kalb,	"	October,	Ohio river.
Germantown,	"	August,	" "
Gondolier,	"	November,	Apple Creek bar.
H. Hudson,	Burnt,	February,	Cincinnati.
Hibernian,	"	March,	St. Louis.
Iron City,	Sunk,	December,	"
J. J. Hardin,	Burnt,	March,	"
Lightfoot,	"	May,	"
Laclede,	"	March,	"
Little Missouri,	Sunk,	"	Missouri river.
Mogul,	"	September,	Ohio "
Mail,	Burnt,	May,	St. Louis.
Missouri Mail,	"	"	"
Monterey,	Sunk,	December,	Kentucky river.
Marengo,	"	September,	Lower Mississippi.
Meteor,	"	August,	Ohio river.
Major Barbour,*	"	February,	" "
Milwaukie,*	"	July,	" "
Monona,	"	March,	Lower Mississippi.
Mendota,	"	January,	" "
Pelican,	Burst,	March,	" "
Pekin,	Sunk,	December,	Upper "
Piney Woods,	Burnt,	October,	Lake Ponchartrain.
Pilot,	Sunk,	"	Arkansas river.
Paul Jones,	"	March,	Ohio "
Plow Boy,	"	September,	Missouri "
Ringgold,	"	February,	Arkansas "
Rambler,	"	March,	Ohio "
Robert Fulton,*	"	April,	" "
Rio Grande,	"	October,	" "
Sea Bird,	Blew up,	January.	Cape Girardeau.
Swatara,	Sunk,	March,	Mouth Ohio river.
Swan,	"	November,	" " "
Suwanna,	"	October,	" " "
Trenton,	Burnt,	February,	Cincinnati.
Tributary,	"	December,	Louisville.
Talma,	Sunk,	March,	New Madrid.
Time and Tide,*	"	February,	Lower Mississippi.
Wyandotte,	"	November,	" "
White Rose,	Burnt,	June,	Cairo.
W. H. Day,	Sunk,	February,	Arkansas river.
Yazoo,	"	March,	Lower Mississippi.
Yazoo City,	"	September,	Memphis.
Yallabusha,	Burnt,	March,	Lower Mississippi.

STEAMBOAT CASUALTIES ON THE WESTERN RIVERS IN 1848.

We have not before now been able to make room for the following interesting statistics of Steamboats, copied from the St. Louis Union of January 12:

Below we give a list of steamboat casualties which occurred on the Western Waters during the year 1848. It has been carefully compiled, and is believed to be very nearly, if not quite, complete. It will be perceived that the number of boats which have met with disasters of various kinds, not including mere breakage of machinery, is one hundred and nine. Those totally lost were fifty-nine—more than a boat per week. An unusually large proportion were destroyed by fire.

A. W. Johnston.—Burst her boilers above Maysville, on the Ohio river; fifty or sixty lives lost and a number of persons injured. Boat and cargo a total loss. She was a new boat, built at Wheeling, Virginia, and on her first trip.

Admiral.—Bound from New Orleans to Ouachita, was sunk to her cabin floor, by coming in contact with the *Clarksville*, bound down, heavily laden with cotton, about the beginning of the year. Owned in St. Louis; burden two hundred and forty-two tons.

Alert.—Snagged and sunk near Little Rock, Arkansas, in April. Total loss. Insured in Pittsburgh and Cincinnati for $5,000.

Atlantis.—Cabin burnt at Portland, Ohio river, in December.

Algoma.—Struck a rock in the Missouri river, near Lexington, 5th April. Large amount of freight damaged. Boat raised and repaired.

American.—Burst connecting pipe near Madison, Ohio river, 20th December. Ten persons scalded—several fatally.

American Eagle.—Burst steam-pipe near Marietta, Ohio river, in March, by which four passengers were badly scalded.

Amulet.—Sunk in Arkansas river; boat and cargo a total loss.

Amelia.—The Amelia, Captain Sully, snagged and lost on upper Red-river, in June. Insured. Cargo of cotton saved.

Anglo-Saxon.—Ran on a log and sunk near St. Mary's landing, Mississippi river, in February. Cargo saved.

Arkansas Mail.—Injured by collision with the *Robert Fulton*, near Westport, Ohio river, June 8th. Damaged by fire at Louisville, December 29th.

Avalanche.—Burnt to the Water's edge at St. Louis, on the night of the 10th of March. Worth $10,000; partly insured at Pittsburgh. Machinery now in the new Avalanche.

Batesville.—Sunk and lost near Batesville, Arkansas, in June.

Bay State.—Struck a bluff bar at Sliding Island, 22d November. Sprung a leak, and threw overboard thirty tons of freight.

Beardstown.—Sunk in five feet water, below the mouth of the Illinois river, early in January. Raised and repaired.

Ben Rush.—Burnt to the water's edge at Pittsburgh. No freight on board. Boat a total loss. One life lost.

Blue-Ridge.—Burst her boilers three miles below Gallipolis; twenty or thirty lives lost, and many persons injured. Boat and cargo a total loss.

Belle Hatchee.—Struck a snag near St. Francis, Arkansas, and sunk, drowning four deck hands. The cabin floated off to within a few miles of Helena. Twenty-five of the crew and passengers were saved by the Pike No. 8. When the boat struck, a deck hand had seized the yawl and escaped, leaving all on board to the mercy of the stream.

Brunswick.—Run into at New-Orleans, on the night of the 5th of July, by two ships in tow of a boat. Lost one wheel, and otherwise greatly damaged. On the 31st of October lost, by running into a bluff bank, during a thick fog, at a point seven miles above Vicksburg. Went down in fifty feet water. Insured for $10,000, boat and cargo.

Clarksville.—Totally destroyed by fire at Ozark island, Napoleon, Mississippi river, on the 27th of May. Captain Holmes and twenty or twenty-five of the crew and passengers lost. Insurance of $10,000 on the boat.

Caledonia.—Struck a snag below New Orleans, about the 1st of January, and was lost.

Champlain.—Struck a snag and sunk in the Mississippi near Sublette's Landing, March 11th. Boat raised and cargo saved.

Cora.—Snagged on the 19th of March, on the Missouri, near Hermann. Bow hauled out of water, and damage repaired. Also, on the night of the 22d August, snagged and sunk in two feet water near Liberty landing. Raised and repaired.

Cambria.—Injured by a gale, and snagged, on the 19th of March, near Cairo. Damages repaired.

Charter Oak.—Injured by fire on the 10th of March, while lying at the St. Louis landing, and narrowly escaped the conflagration which destroyed four other boats. Totally destroyed by fire at Bayley's landing, on the Mississippi, on the morning of the 12th of April. She was freighted with grain and hemp for New-Orleans. Eight persons, including the first engineer, were lost, and many others fearfully injured. The boat was new, and valued at $30,000. Insured.

C. Connor.—Struck a snag and sunk in twenty feet water, in Bayou Catalpha. Boat and cargo a total loss. No lives lost.

Connecticut.—Injured by snagging in Lower Mississippi.

Car of Commerce.—Sunk on the rocks at Louisville, in December.

Chalmette.—Fired by an explosion on board the schooner *Maria Thomas*, at New Orleans, July the 31st. Damage inconsiderable.

Confidence.—Sunk by collision with the *Edward Bates* at Hamburgh, on the Mississippi river, September 11th. Raised.

Concordia.—Boilers exploded opposite Plaquemine, Mississippi river, September 17th. Thirty persons scalded and missing. Capt. Pease and Mr. Mosely, second clerk, mortally injured.

Circassian.—Burnt at Cincinnati 27th of February.

Defiance.—Lost at Liberty, Mississippi river, 27th of February, by running into the shore and sinking.

De Kalb.—Sunk on the Ohio near Paducah, in November, by being run into by the Clipper.

Edward Bates.—Boilers exploded, as was alleged, through inefficiency or carelessness of the first engineer, on 12th of August, as the boat was under way, below Hamburgh. Mississippi river. Thirty persons were killed or missing, and thirty more badly scalded, many of whom died.

Grey Eagle.—Descending the Mississippi river below Randolph, on the night of the 10th of June, came in collision with the *Sultana* ascending, by which disaster the steam pipe of the *Grey Eagle* was broken and the hull of the boat much injured. A number of persons were scalded, and some drowned by jumping overboard.

Greenwood.—Lost cabin by running into shore, Kentucky river, December. Negro man drowned.

Germantown.—Sunk in three feet water at the foot of the falls of the Ohio, about the first of August. Raised and repaired.

Gondolier.—Sunk at Apple creek bar in November, by coming in collision with the *Josiah Lawrence.* Nothing but the machinery saved. One life lost. Boat insured for $12,000.

Homer.—Badly crippled by collision with the *Childe Harold*, at Twelve Mile Point, Mississippi river, February 11th.

Herald.—Injured by collision with the *Die Vernon*, above St. Louis, February 22d.

Hobolochitto.—Struck a snag about thirty miles from Springfield, Mississippi, and sunk in eight feet water. Boat and cargo supposed to be a total loss.

Hendrick Hudson.—Burnt at Cincinnati, 27th February, five lives lost.

Hibernian.—Burnt at St. Louis on the night of the 10th March. Owned in Nashville, Tennessee. No insurance; valued at $3,800. One life lost.

Highland Mary.—Collapsed a flue at Coal Port, Ohio river, 27th May. One person scalded. Burst steam pipe at St. Louis, July 26th. The second and assistant engineers and several other persons scalded.

Iron City.—Sunk at Hennepin, Illinois river, in August. Raised. Sunk by ice, and totally lost at St. Louis, December 31st. Several lives lost.

J. J. Hardin.—Burnt at St. Louis, March 10th. Valued at $10,000. Insured.

Kinney.—Blew up on the Tombighee, 26th May, Seven persons killed and eighteen wounded.

Lightfoot.—Burnt at St. Louis, May 9th. Insured for $5,800.

Laclede.—Burnt at St. Louis, March 10th. Valued at $15,000; insured for $5,000.

Little Missouri—Struck a snag at Gwinn's bar, Missouri river, 25th March and sunk. Valued at $18,000; insured for $12,000. Machinery and furniture saved.

Lady Madison.—Injured by snagging at Manchester, Ohio river, in the early part of May.

Laurel.—Sunk by collision with the *Anthony Wayne*, in September, on the Illinois river. Raised.

Mendota.—Sunk in seven feet water near St. Genevieve, latter part of January. Lost.

Monona.—Sunk in the Lower Mississippi.

Major Barbour.—Run into and sunk by the *Paul Jones* on the 3d of February, near Troy, Indiana. The second clerk, Mr. Allison, and seven passengers were drowned. After the sinking the upper works caught fire and were burnt. The boat was new, and insured for $10,000.

Missouri.—Injured by fire at Memphis, on the 6th March. Was saved by the use of the "doctor."

Milwaukie.—Sunk on the falls of the Ohio, July 14th. Raised.

Marengo.—Burst one of her boilers about the middle of April, at Tunica Bend in the Mississippi. Captain, engineer, and five firemen scalded. A negro man jumped overboard and was drowned. Sunk in the Lower Mississippi by collision with the steamer *Harry Hill.* Boat and cargo a total loss.

Mameluke.—Injured by fire at St. Louis, May 9th.

Mail.—Burnt at St. Louis, May 9th. Valued at $5,000. No insurance. The fire originated in the Ladies' cabin.

Missouri Mail.—Burnt at St. Louis, May 9th. Insured for $5,000.

Mary.—Partially burnt at St. Louis, May 9th. Insured for $5,000. Repaired.

Monterey.—Snagged and lost in the Kentucky river near Paint creek, December.

Meteor.—Cut in two and sunk by the *Paris* on the 23d of August, opposite Cloverport, in the Ohio. The Meteor was bound for New Orleans, heavily freighted with produce; the Paris bound up. The accident occurred in a fog. Six or seven lives were reported to have been lost.

Mogul.—Struck a snag, which tore up her bottom from bow to stern, and sunk her immediately, at Cloverport, September 30th. Insured for $10,000. Machinery and furniture saved. The boat was new.

Nathan Hale.—Snagged at St. Mary's landing in February. Repaired.

North Alabama.—Injured by the ice at Hanging Dog bar, in December.

North America.—Injured by collision with the *Josiah Lawrence* near Cairo, April 10th.

Oliver.—Burst one of her boilers near Mobile, on the 2d September. Captain Miller, her commander, had one of his legs broken, and was badly scalded. A passenger and one negro man were killed, and eight negroes scalded. Captain Miller was commander of the *Kinney* also at the time of the explosion on board of that boat, and had a leg broken at that time.

Odd Fellow.—Injured by snagging, sixteen miles above St. Louis, February 9th. Repaired. Ran into the woods at Diamond Island, Illinois river, in December. Lost chimneys, and a large part of her cargo.

Oella, No. 2.—Collapsed a flue on the Arkansas in November. Several persons were killed and others scalded.

Planter.—Burst a boiler at Twelve Mile Island, Illinois river, early in January. The boat was dreadfully shattered, and when towed to St. Louis for repairs, presented the appearance of a perfect wreck. Several persons, including an engineer, the chamber-maid, and three cabin passengers were killed, and several others badly scalded. Repaired. Sprung a leak at Pratt's landing 22d of August, and Returned to St. Louis for repairs.

Paul Jones.—Struck a snag at Grand Chain, March 16th, sunk and broke in two.

Prairie Bird.—Injured by coming in contact with the *Beardstown* at the mouth of the Illinois river, August 6th. Repaired.

Palestine.—Burst a cylinder head at Island No. 40, in August.

Pelican.—Burnt at Biloxi, 23d of August. No insurance.

Plow Boy.—Sunk in the Missouri on the 6th of October, near Providence, by running on a snag. She was entirely new. One passenger drowned.

Pekin.—Sunk in the Mississippi above Chateau's Island, December 28th.

Piney Woods.—Burnt on Lake Ponchartrain on the 6th of October. Fifteen persons were known to have been lost.

Pilot.—Sunk in the Arkansas river. Boat and cargo a total loss.

Ringgold.—Lost on the 11th of February by sinking, at Pine Bluff, Arkansas river.

Rambler.—Sunk and destroyed on the 20th of March, near North Bend, Ohio river, by the falling of a tree across her bow.

Robert Fulton.—Ran on the rocks and sunk at Brown's Island, Ohio river, 19th of April. Raised and repaired.

Ridgeley.—Collapsed a flue on Black river, opposite Trinity, June 21st. One person was killed, and some twenty dangerously scalded.

Robert Weightman.—Burst starboard boiler on the 12th of August, at Fishing creek bar, Ohio river. One person killed and three scalded.

Rio Grande.—Sunk at Golconda, Ohio river, on the 26th of October, from Cincinnati bound for St. Louis. Boat badly broken.

Sea Bird.—While lying at Cape Girardeau, on the night of the 5th of January, bound from New Orleans to St. Louis, with twelve hundred kegs of powder on board, caught fire, and in a few minutes after blew up and sunk. No person was killed, all on board having fled to the shore as soon as the fire was discovered. The concussion caused considerable injury to the town of Cape Girardeau.

Swatara.—Sunk by collision with the *Yazoo*, on the 10th of March, in the Mississippi, twelve miles above the mouth of the Ohio. New boat, and a total loss.

Sultana.—Injured by snagging, on the night of the 2d of August, fifteen miles above Cairo, on her way from New-Orleans to St. Louis. Three privates of the 2d Infantry were knocked overboard in their sleep and drowned. The snag was ninety feet long, and passed up through the starboard guards of the Sultana, in front of the wheel-house, knocking down a platform amidships, on which the soldiers slept.

St. Louis Oak.—Snagged opposite Providence, Missouri river, March 18th. Saved from sinking by bulk-heading.

Swan.—Sunk and lost in the Ohio near Marietta, November 10th. She was bound from Pittsburgh to St. Louis with an assorted cargo. No insurance.

Sewanee.—Struck on the Grand Chain, in the Ohio river and sunk. A total loss.

Sea Gull.—Injured by striking an abutment in the Kentucky river.

Trenton.—Burnt at Cincinnati, February 27th.

Tributary.—Burnt at Louisville, December 29th.

Talma.—Sunk in March, near New Madrid. Raised.

Time and Tide.—Struck a snag near Claiborne Island, in the Mississippi, on the 16th of February, and sunk in eight feet water. Raised.

Telegraph.—Burst a pipe at Louisville, April 3d, by which one of her engineers was injured.

Uncle Ben.—Injured by collision with the *Martha Washington*, on the 14th of June, near Rome, Ohio river.

Uncle Sam—Injured at Bayou Sara, on the 18th of July, by running on the wreck of the *Old Clipper*.

W. H. Day.—Sunk in Arkansas river; boat and cargo a total loss.

Wyandotte.—Sunk to her hurricane roof, and lost, at Paw Paw Island, on the 21st of November, by striking a snag as she was rounding to to put on shore some deck passengers who were quarreling. From twenty-five to thirty persons were drowned, principally deck passengers.

White Rose.—Destroyed by fire at Cairo, Illinois. Boat and cargo a total loss.

Westwood.—Burst her boilers twelve miles below New-Orleans. Twelve to fifteen lives lost, and several persons severely injured.

Yazoo.—Sunk and totally lost near New-Orleans, by running on a raft, 31st of March.

Yazoo City.—Sunk and totally lost by striking a snag thirty miles above Memphis, September 2d. She was bound from New-Orleans for Cincinnati, laden with railroad iron and salt.

Yallabuska.—Burst her boilers opposite Donaldsonville, Louisiana. Thirty or forty lives lost; boat burnt; cargo a total loss.

Zachary Taylor.—Ran into the woods on the Ohio river, and lost chimneys.

2. MEMPHIS AND ST. LOUIS CONVENTIONS.

In our last number we made allusion to the proposed convention at Memphis, when discussing the question of reaching the Pacific ocean across the continent. This convention, we perceive, in consequence of a general prevalence of cholera in the Valley, has been postponed until October next. In the meanwhile efforts will be made to collect reliable information for the convention.

We observe, also, that the people of St. Louis propose a similar meeting in their city, in October, and have issued a circular inviting delegates from all the States. It is our desire, should circumstances permit, to attend both conventions. We believe, as we have said before, that the enterprise is an American one, and are quite willing that the best point should have the precedence. At present our predilections in favor of Memphis are unchanged, though we shall listen attentively to the other side.

3. COMMERCIAL COLLEGE AT NEW ORLEANS.

This department of the UNIVERSITY OF LOUISIANA is now organized and prepared to conduct the education of students, in mercantile and other business matters. *Classes will be formed from November until May.*

There will be two courses of instruction:

1st. *A Course of Lectures* upon—The rise and progress of the science of political economy; productive powers of labor; nature, accumulation, etc., of stock; progress of opulence in different nations; mercantile systems; revenue; sources of public wealth; growth and progress of the United States; ancient commerce; commerce in dark ages; in middle ages; growth of modern commerce; present commercial world; navigation; treaties; tariffs; banks; internal improvements; agriculture; manufactures; population; statistics, etc.

This course will consist of about twenty-five or thirty lectures, during the winter, at such hours, and on such days, as may be most agreeable to the majority of the class.

Tickets for the course—which will be as interesting to all classes of citizens as to those engaged in or preparing for mercantile life—TEN DOLLARS.

2d *Course.*—This is intended for regular matriculated students. Instructions will cover the whole field of commercial education, given daily, in three or four recitations, etc: Writing, book-keeping, commercial correspondence, accounts, account sales, invoices, general principles of commercial law, banking, insurance, exchange, partnership, factorage, guarantee, brokerage, bankruptcy, wrecks, salvage, freights, privateering, marque and reprisal, quarantine, custom house regulations, etc., sketches of eminent merchants. A course of reading in history and commercial geography and navigation, will be embraced.

Length of term occupied in this course will be five months, and the charge for each student $50. The services of an accomplished tutor, in this department, will be obtained, and no pains spared in making the pupils proficient. Public examinations will also be had. Deductions will be made where students enter after the beginning of term.

In a country like ours, nothing can be more important than such a course of education. The student is at once fitted for the active, busy life, in which he must engage to reach success and fortune. Commercial colleges are growing up in various parts of the Union, and can be more important no where than in New Orleans.

Planters in Louisiana and the neighboring States, would do well to consider the advantages of this institution to their sons.

The advantages of public and private libraries, reading rooms, and business experience enjoyed in New Orleans, are unrivaled.

☞ Students admitted at any time. See advertisement in this Review.

Address J. D. B. DE BOW,
Professor of Political Economy, Commerce and Statistics, University of Louisiana.

4. PROPOSED ENDOWMENT OF THE UNIVERSITY OF LOUISIANA.

At the last session of Congress, a grant of the unreclaimed and swamp lands, within the State, was made to Louisiana, through the exertions of one of her citizens. It is thought that these lands will repay all the expense of drainage and reclamation and leave a net surplus of at least *one million* or *one million and a half* acres of land, valuable for the culture of sugar and other agricultural purposes. The Legislature of Louisiana will now have an opportunity of endowing, in a becoming manner, the noble institution which was in contemplation by the convention that framed our last constitution. It can make the UNIVERSITY OF LOUISIANA one of the proudest and most distinguished seats of learning in America, and attract to it students from half the Confederacy, from the neighboring islands, from Mexico and portions of South

America, and that WITHOUT ONE CENT OF EXPENSE TO THE PEOPLE. We propose that a portion of these reclaimed lands, say two or three hundred thousand acres, be reserved and appropriated as a *University Fund*, to be controlled by a Board of Administrators from the State at large. The grant from goverment is a pure gratuity, and it becomes a liberal State like Louisiana to apply a portion of it in the manner indicated. We have already a land fund for *school* purposes. The "University Fund," should realize an annual revenue of *forty thousand dollars*, the least sum at which an institution worthy of our position can be sustained. With this, fifteen professorships may be endowed, apparatus, library, cabinets, etc, provided, observatories and additional halls built, needy students educated free, etc. Without such endowment the University must degenerate into a mere grammar school, which its literary and scientific department is now in eminent danger of doing, despite of all the handsome structures erected or in progress.

The University should be required to *educate free* a certain number of students from the public schools of the whole State, and conduct *agricultural, geological, botanical, etc., surveys, of the State and analysis of its crops*, without expense.

It is worthy of remark, that Michigan, a new State, and with little advantage of position, has established a *University Land Fund*, capable of maintaining *twenty-six professorships*, furnishing magnificent buildings, apparatus, etc, and forming one of the most magnificent institutions in America! Alabama has a University Fund of $250,000.

In the same connection we remark, that in the proposed donation to Florida of the unreclaimed Ever Glades, the act reserves the lands for educational purposes for ever.

5. EDITORIAL NOTE OF TRAVEL AND BOOKS.

THE Editor left New Orleans early in June to attend the Memphis Convention. At Memphis he learned of the postponement of the convention, but had many interesting interviews with the leading gentlemen engaged in getting it up. The cholera was prevailing, epidemically, at Memphis, and at many of the towns passed upon the Mississippi and Ohio rivers, on his passage to Louisville. At Louisville he examined the branches of manufacturing industry, etc., and obtained the promise of a paper upon the progress of that city. From Hamilton Smith, Esq., an enterprising citizen and one of the founders of the manufacturing and mining town of *Cannelton*, on the Indiana side of the Ohio river, he received many attentions and spent several days at his delightful country seat, embellished with one of the finest libraries, gallery of paintings and statuary, to be found in the West. Mr. Smith is one of the three or four subscribers, only, which the great city of Louisville gives to the Commercial Review—so intimately addressed to its interests; but he has individually contributed to the amount of half a dozen subscriptions. From Louisville we passed to *Drennon's Springs* by steamer up the Kentucky river. This famous watering place, from which the present note is written, is only half a day's distance from Louisville, and is in one of the most beautiful regions conceivable. Romance lends her charms to every prospect—the sweep of hills, rising top upon top on every side to the horizon—the verdure—the dense forests. Every variety of water is furnished from the purest springs—the strongest sulphur, white, blue, black sulphur, chalybeate, etc. From Drennon's Springs we visited *Frankfort*, the capital of Kentucky, and the *Collegiate and Military Institute* at Franklin Springs, about six miles distant. Here our old friend and college mate, Col. Capers, the commanding officer and principal of the institution, received us with characteristic hospitality. Col. Capers is one of the best educated and most accomplished gentlemen of his age. At College we remember that his rank was always first. Since then he has filled various important posts—in the college of Charleston—in the Military Institute of South Carolina, for several years—in Transylvania college—and is now at the head of his own institution. Here is a new and high field of usefulness. The institute is located in the most delightful region of all Kentucky. The grounds are well laid out, and the buildings are of the most commodious and substantial character. Several hundred students could with ease be accommodated, and we predict that this number will yet be attracted by the unrivalled advantages of the place. At present we find some students here from points as distant as Louisiana and Texas, and the number from those quarters is on the increase. For full particulars about the school, the reader will refer to the circular among our advertisements.

We ought to have acknowledged the receipt, at Memphis, from our friend, Robert Josselyn, of a superbly bound and finished copy of his poems, entitled the "*Faded Flower and Other Songs*," etc. They are delicate in sentiment, glowing in fancy, and of true poetic tenderness. We should be pleased to make some extracts from this beautiful volume, did the occasion admit; but can only send to the author, at his *Holly Springs'* home, our congratulations and thanks. We may refer to him again. The work can be had of J. B. Steel, New Orleans.

6. TO THE PLANTERS.—SUGAR AND COTTON.

The importance of an AGENCY in New Orleans in connection with the Review, to aid the planters in the *purchase and sale of estates*, has frequently suggested itself. We have determined to start it. As the Review circulates largely in all the southern and western States, and is now getting a northern circulation, planters will have an opportunity of offering their estates to the best advantage. They will be charged for the advertisement of estates, according to the space occupied, and time advertised, *on reasonable terms*, in the pages of the Review, as will be agreed upon. When sales are effected through the AGENCY, the usual commission will be charged. *Editorial notices* will be called to the estates. Messrs. H. Weld & Co., publishers of the Review, able and energetic business men, will take *exclusive* charge of this department. In the present number we call attention to a large plantation in Attakapas, Louisiana, among our advertisements.

☞ All letters relating to the business of the Review will be directed to Weld & Co., New Orleans; all relating to editorial, to J. D. B. De Bow, care of Weld & Co., publishers Commercial Review, New Orleans.

7. OUR BOUND VOLUMES COMPLETE.

We have still a few sets remaining of the Old Series of the Commercial Review, in handsomely bound volumes, 1846—1849. We wish those of our subscribers who have not the work complete would order them, or have them taken by the public or private libraries in their vicinity. In a short time it will be impossible to obtain them on any terms, as the edition printed was small. We are anxious to distribute the volumes, and will deliver them at any points.

8. OUR CONTRIBUTORS.

We have several papers on hand for publication in our next. Our acknowledgements to friends for new subscribers and remittances will also be made. We have received an elaborate answer to Ellwood Fisher's Lecture, the substance of which will be given. We invite papers upon the Slave Laws of different southern States; also, contributions upon Cotton and Cotton Manufactures, and upon the Wealth, Progress, etc., of each of the southern and western States. We are now preparing an elaborate one ourself, upon Kentucky. Several able articles upon Slavery at the South will soon appear.

UNIVERSITY OF LOUISIANA,—NEW-ORLEANS.

MEDICAL DEPARTMENT.

Professors.—Drs. T. HUNT, JAMES JONES, WARREN STONE, J. L. RIDDELL, A. H. CENAS, G. A. NOTT, A. J. WEDDERBURN, Y. R. LE MONNIER.

The Lectures in this College, lately concluded by the graduation of a large class, will commence on the 20th of November, in the capacious edifice on Common street. Having adopted and maintained a high standard of medical education, the Professors, from their connection with the City Hospital, enjoy superior advantages for practical instruction in clinical Medicine, Surgery, and Midwifery. There is a fine amphitheater in the Charity Hospital, for surgical operations and lectures. Opportunities for the pursuit of practical anatomy are unequalled—subjects being supplied gratuitously in any number. For further information, persons will please address the Dean for the printed circulars and catalogue. For the correction of false statements it is proper to mention, that the expenses of boarding, &c., in this city are much reduced, that the epidemic yellow fever never prevails after the first week in November, and that, hereafter, contagious diseases will not be promiscuously admitted into the medical wards of the Hospital.

JAMES JONES, M. D., Dean.

LAW DEPARTMENT.

The Lectures and instruction in this department will commence on the second Monday of November next, and continue until the 1st of May.

Those by Professor BULLARD will embrace History of Roman Law, Analysis of the general principles of Roman Law, on the approved method of the German School; Jurisprudence of Louisiana, compared with Roman Law, and French and Spanish codes; outline of Land Titles in Louisiana, derived from Spain, France, and the United States.

Those by Professor McCALEB will embrace Admiralty and Maritime Law, International Law, including Law of Prize, Rights of Peace and War, Treaties, etc.; Jurisdiction United States Courts, Supreme, Circuit, District, Instance, and Prize Courts, &c.

Those by Professor HUNT will embrace Commercial Law, as it relates to mercantile persons, property, contracts, remedies, partnerships, corporations, bills of exchange, freight, average, insurance sale, guarantees, lien, &c., &c.; Criminal Law and Practice; Law of Evidence.

Those by Professor MONROE will embrace the Common Law and Equity, Jurisprudence, and Practice and Pleadings in Civil Cases; Constitutional Law.

Chief Justice EUSTIS will deliver a series of Lectures on the Rights of Persons and the Conflict of Laws; and CHRISTIAN ROSELIUS, Esq., will assist as Adjunct-Professor, in the department of Civil Law.

Students must produce satisfactory evidence of good moral character.

The degree of Bachelor of Laws conferred on those who have attended two courses of Lectures, or one full course after having studied at least one year in the office of a Counsellor at Law, and after strict examination by all the Professors. A Diploma from the law faculty of the University is equivalent to a license to practice in the courts of Louisiana. During the course there will be frequent examinations. There will be organized also, a Moot Court, which will be holden once every week, presided over by one of the Professors.

No city in the United States has the advantages which New Orleans possesses for the ready and perfect acquirement of the Modern Languages. Good Board can be obtained, varying from twenty-five to thirty dollars per month.

The price of *Tickets for the Course* is fixed at $100, or $25 for each Professor.

H. A. BULLARD, Dean of the Faculty.

☞ Access to a good Library afforded the Students.

DEPARTMENT OF POLITICAL ECONOMY, COMMERCE, &c.

The course of instruction will be conducted by Oral Lectures and examinations. Though primarily intended for the large and important class engaged in, or preparing for, Commercial life, it is at the same time addressed to all who are pursuing a liberal education, with a view to any of the professions. No subject can be more generally interesting and important than those which relate to the industry, resources, and wealth of nations, and the laws which influence their progress or decline. The course will embrace,

I. Relations of Governments and Industry; Sources of National Wealth and Progress, etc.; Production, distribution, and consumption of wealth.

II. History and Progress of COMMERCE, its Principles and Laws; Home and Foreign Commerce; Tariffs, Treaties, Life Insurance; Roads, Canals, Shipping, and Revenue; Systems of Reciprocity, Balances of Trade; Mercantile and Navigation Systems; Colonies and Colonial Systems; Banks, Finances, Accounts, Transportation, Book-keeping, Principles of Merchant Law; Commerce of Nations, Ancient and Modern; Geography of Commerce; Commodities of Commerce; Literature of Commerce, etc., etc.

III. Progress and results of AGRICULTURAL SCIENCE; Principles of Agriculture; Comparative condition of Agricultural, Commercial, and Manufacturing communities; Statistics of Agriculture, etc.

IV. Origin and Progress of the MANUFACTURING SYSTEM; its relations to the other pursuits; Invention and Machinery in Manufactures; Condition of the Manufacturing Classes; Statistics of Manufactures, etc.

A course of Lectures will be delivered upon the PROGRESS OF THE AMERICAN REPUBLIC, and occasional *Public Lectures* upon the same subjects. The advantages of Public and Private Libraries, Reading Rooms, and Business Experience enjoyed in New Orleans, are unrivalled.

Lectures begin in November and continue throughout the winter.

Students will have the advantage of any of the other chairs of the University, by paying the usual fees. A Tutor in the Modern Languages, Book-keeping, etc., etc., will be provided for moderate additional fees. Applicants will apply early. J. D. B. DE BOW, Professor.

EAGLE GIN-STAND,

MANUFACTURED BY

BATES, HYDE & CO., BRIDGEWATER, MASS.

Agents:

Geo. H. Gray & Co., Boston.
Tufts & Hobart, New-Orleans, La.
John Philips, Mobile, Ala.
Baker & Little, Natchez, Miss.
Taylor, Hunt & Co., Vicksburgh, do.

J. Heard & Co., Yazoo City, Miss.
Harris, Memphis, Tenn.
Edward Hobar, Galveston, Texas.
James Hibbard, Napoleon, Ark.
Wm. Flagg, Bachelor's Bend, Miss.

The undersigned, manufacturers of the Eagle Gin-Stand, respectfully invite the attention of Cotton Planters, and others interested, to some of the recent improvements in their Gin Stands now offered for sale:—

The frame of the machine, which is so essential to the durability and accurate working o the parts, is constructed in a more permanent and substantial manner than formerly, having eight posts or stands, and is permanently secured and bound together with joint bolts.

The "Detached Grates," which have been in extensive use for many years, have been improved in form, and adapted to other parts of the improved machine; they are chilled or hardened where most exposed to friction, and in their present form are believed to be superior in many respects to any other form of grate.

The "Improved Patent Brush," recently added to the Eagle Gin-Stand, is believed to combine all the advantages of the cylinder or close, and the winged or open brushes, avoiding the objections to which both these forms are liable; the whole supply of air for the draft of the Stand is received through openings in the Brush-heads, and forced out between the rows of bristles. In this way, a more full and uniform current is established; the motes, dirt and false seeds are more effectually disengaged from the fibres, and the ginned cotton, when delivered into the lint room, has that peculiar "combed" or "carded" appearance so well known to dealers in that staple.

There are many minor improvements, not necessary to be mentioned in this circular, which will be found to add to the merits of this machine.

Ample evidence of the satisfactory operations of these Gins, may be obtained from their agents.

☞ Orders addressed to us directly, or to either of our agents, will receive immediate attention.

Bridgewater, Mass. **BATES, HYDE & CO.**

CARVER'S IMPROVED COTTON GINS.

G. BURKE & CO.,

COTTON FACTORS AND GENERAL COMMISSION MERCHANTS,
CHIEF AGENTS FOR THE SALE OF
E. CARVER & CO'S.
IMPROVED COTTON GINS.
THEY HAVE ON HAND A LARGE ASSORTMENT OF THE USUAL SIZES,
No. 70 Magazine Street,
OPPOSITE THE CANAL BANK, *NEW-ORLEANS.*

Agents:

Cobb & Manlove, Vicksburg, Miss.
F. B. Ernest, Natchez, do.
Boughton & Murdock, Rodney, do.
N. McCundall, Bayou Sara, La.

Titus & Co., Memphis, Tenn.
Horton & Clark, Mobile, Ala.
Gilmer & Co., Montgomery, do.

Note.—The Cuts that should accompany these advertisements have been misplaced.

Phœnix Foundry, Gretna.

The subscriber has made such arrangements as will enable him to execute orders for any description of FOUNDRY WORK, on as good terms as can be given by any concern in the country. He solicits the patronage of Sugar Planters and others, pledging himself, that for workmanship and dispatch, his establishment shall be surpassed by none. ☞ Orders left with his agent, Artemon Hill, *No.* 34 *Gravier St., New Orleans*, will have immediate attention.

SILVESTER BENNETT.

ISRANG & WAGNER,

Southern Clothing Manufactory.

—

D. ISRANG,

MILITARY AND CIVIC TAILOR.

—

C. F. WAGNER,

PLANTATION GOODS, CLOTHING,

Military Goods and Gentlemen's Furnishing Store.

☞ *All orders filled on the shortest notice.*

82 Magazine, corner of Poydras St.

GOOD AND FASHIONABLE CLOTHING.

—

ONE PRICE STORE.

ALFRED MUNROE & CO.,

No. 34, Magazine St.,

Have now the largest stock of Clothing and Gentlemen's Furnishing Goods in the South; and as all our goods are manufactured expressly for our own retail sale, we consequently have the fullest assortment of every description of Clothing in New-Orleans; and in requesting a call from all who read this, we do so with the fullest confidence that we are able to meet their wishes, and afford the most perfect satisfaction to all our customers. The system of business which we have established cannot but be satisfactory to the purchaser. Every article in our store is offered at the lowest price at which it can be sold, and no reduction can in any instance be made. If, after the purchase of any article, any dissatisfaction exists, it may be returned or exchanged, or the money will be refunded.

A. KIRKMAN. R. DYAS. W. T. MASSIE.

KIRKMAN, DYAS & CO.,

WHOLESALE GROCERS,

52 and 53 New Levee.

J. D. HALLAM,

Attorney and Counsellor at Law,

Opelousas, La.,

Will attend the Courts in the 14th and 15th Judicial Districts.

Reference: Hon. George R. King,
Messrs. Stockton & Steele,
" Waters & Co.,
Joseph H. Moore. } *N. O.*

JOHN S. WORTH,

Large Retail Store for the sale of Gentlemen's and Ladies'

FINE BOOTS AND SHOES,

TRUNKS, VALISES, CARPET-BAGS, &c.,

Under the St. Charles Hotel, corner of

COMMON-STREET, NEW-ORLEANS.

Always on hand, at the above Store, a large assortment of the above articles (wholesale) at our Newark Factory prices.

☞ *Manufactory, 346 Broad-st. Newark, N.J.*

NEW CLOTHING STORE.

—

JOHN SOUTHWELL & CO.,

21 CANAL ST., Under Planter's Hotel,

Keeps constantly on hand Fashionable Clothing of every description.—Boys' Clothing, Plantation Suits, Gentlemen's Furnishing Goods, Trunks, Carpet Bags and Umbrellas, and every article usually kept in a well stocked Clothing Store.

W. S. MORGAN,

WATCHMAKER AND JEWELER

NO. 37 CANAL STREET,
Third door below Camp-street,

☞ Watches, Jewelry, Canes, Umbrellas and Fancy Goods. ☜

LAWRENCE & BLOOD,

Grocers & Commission Merchants,

16 NEW LEVEE.

Brinkleyville Vineyards and Nurseries.

A pretty large supply of *Scuppernong* (the *best* grape in the *world*, both for fruit and wine, in our country) grape vines, well-rooted, still on hand; and some other best varieties for American culture, at the medium price of 25 cents each, and $4 per hundred for cuttings. Also, such

FRUIT AND ORNAMENTAL TREES

As are most suitable for the southern parts of our Union. Also, Rhubarb, or Pie-plants, for Tarts; and Raspberry and Strawberry—and, in short, most articles in the Nursery line of business, *at moderate prices.*

BEST AMERICAN WINES, at from $1 to $6 per gallon, according to quality. Barrels or casks, as well as bottles of wine, and Nursery articles, or all together, when for distant places, put up in Boxes to prevent abstraction. &c.

Cash, or equivalent, before forwarded. An equivalent, a good draft on bank; say of Richmond, Va.

Boxes, as heretofore, may be sent to New-Orleans, by a line of packets from Richmond, Va., or through New-York, and insured by my agents, PEEBLES, WHITE & DAVIS, at Petersburgh, Va. In case of box lost, another sent, or amount refunded.

Thankful for patronage and high encomiums, by letter, on his wines, vines, &c., especially from gentlemen South and West of the Union, the subscriber hopes by unremitting exertions to further advance the important Vineyard and Nursery cause in our country.

SIDNEY WELLER.

Brinkleyville, Halifax County, North Carolina, Dec. 16, 1848.

WILLIAM DINN,

SEEDSMAN AND FLORIST,

NO. 11 COMMON STREET,
Flower Garden at the end of Apollo-street,
NEW-ORLEANS.

☞ Garden, Farm and Flower Seeds; Garden Tools, Agricultural Implements; Fruit Trees of all kinds; Shrubbery, Green-house Plants; Dutch Bulbous Flower Roots. Books on Gardening, Farming, &c., for sale on reasonable prices.

UPHOLSTERY, PAPER HANGINGS,

Transparent Window Shades, &c., &c.,
WHOLESALE AND RETAIL,
No. 58 Chartres Street.

A Splendid Assortment just received.

☞ Paper Hanging done in the best manner and warranted. DUBOIS & FINN.

HOVEY'S TRUNK MANUFACTORY,

Clinton Avenue, Brooklyn, L. I.,

☞ REPOSITORY, 188 Pearl-st., New-York; 9 Canal-st., New-Orleans.☜

J. H. PALMER.

Wholesale Dealer in Dry Goods.

☞ Especial attention given to *Plantation* and *Family Goods.*☜

56 GRAVIER-ST., NEW-OREANS.

G. N. MORISON,

WHOLESALE DRUGGIST,

And Dealer in Paints, Oils, Glass, Dyestuffs, &c.
12 MAGAZINE-STREET.

SAMUEL JONES, JR.,

[Late Talbot, Jones & Co., Baltimore.]
GROCERY,
Commission and Forwarding
MERCHANT,
NO. 45 POYDRAS-ST., NEW-ORLEANS.

HYDE & MOSS,

Auction and Commission Merchants,

Sellers of and Dealers in all kinds of
MERCHANDISE,
No. 13 Canal street, running through to 28 Common street, New-Orleans.

Where buyers of merchandise can, at all times, find good bargains at private sale, or at auction, of Groceries, Staple Dry Goods, Ready-made Clothing, Hats, Boots, Shoes, and a great variety of other articles of general use, always at greatly reduced prices at wholesale.

COXE & CO.,

Wholesale and Retail Druggists,

Corner of MAGAZINE AND POYDRAS Sts.,
NEW-ORLEANS,

Import and have constantly on hand, a large assortment of Fresh and Genuine Drugs and Medicines, which are warranted pure, and offered for sale upon reasonable terms.

FROST & CO.,

Dealers in
Hats, Boots, Shoes, Clothing and Plantation Goods.

10 MAGAZINE, between Canal and Com. sts,
NEW-ORLEANS.

MILLSPAUGH & MAUNSELL,

Ship Chandlers & Grocers,

NO. 54 FRONT LEVEE,
Third Municipality, between Enchien and Port streets,
NEW-ORLEANS.

☞ Ship and Cabin Stores and Family Groceries put up at the lowest market prices, and delivered free of expense.

NEW CLOTHING STORE.

Under St. Charles Hotel, corner Common-st.

FASHIONABLE CLOTHING.

A complete and general assortment of superior Ready Made Clothing and Furnishing Goods always on hand. The clothing is from their own Manufactory. Purchasers are invited to call and examine their goods—where they will not only find the best and most fashionable made Garments, but decidedly cheaper than at any other Clothing House in the the city of N. Orleans. MOGRIDGE & ANTHON.

Under St. Charles Hotel, corner Com. st.

WHOLESALE CLOTHING STORE.

TAYLOR & HADDEN,

35 Magazine Street,
Corner of Gravier street (Granite Buildings, opposite Bank's Arcade),

Receive weekly from their Manufactory in N. York, fresh supplies to their stock of CLOTHING, made in the most fashionable style, which they sell at the lowest New-York prices, wholesale and retail.

NEW-ORLEANS

AGRICULTURAL WAREHOUSE;
R. L. ALLEN,
No. 75 CAMP-STREET,
Expressly for the sale of
PLANTERS' AND FARMERS' IMPLEMENTS:

Plows, Harrows, Rollers, Corn Planters, Cultivators, Drill Barrows, Reaping Machines, Scythes, Rakes, Horse-Powers, Hay, Straw and Stalk-Cutters, Corn-Shellers, Corn, Rice and Grain-Mills, Axes, Cotton Gins, Hoes, Spades Shovels, &c., &c., &c.

P. R. FELL & CO.,

Importers of and Dealers in

CROCKERY, CHINA AND GLASS-WARE.
WHOLESALE AND RETAIL,
No. 84 Common Street, New-Orleans.

☞ Plated German Silver and Britannia Castors, Tea-setts, Forks and Spoons, Table Cutlery, Tea-trays, Lamps, &c., &c.

ORANGE ISLAND PLANTATION.*

Plantation for Sale, with 430 Shares of Citizens' Bank Stock.

This Plantation is situated ten miles west of New Iberia, and fronting fifty acres on Lake Peigneur, and is in the Parish of St Martins, Attakapas, Louisiana. It contains upward of 4,000 acres of Land, including 700 acres of woodland, and is arable. It is one of the best stock farms in the State; and as a sugar estate, is equal to any in this section of the country.

Improvements.—Dwelling House, with Orchard of all fruits; Lawn; Live-oak and Magnolia Groves; Garden, Kitchen, Servants' quarters, Dairy, Corn-house; Stables large enough to contain eighty horses; good Sugar-house, Mill, Apparatus, &c., for four hundred hhds.: Overseer's house, Negro houses; Blacksmith's shop, Baggass sheds, and sheds for cane. Corn field of 600 acres. Whole land well ditched and fenced—Pastures fine, and capable of supporting 4,000 head of cattle, winter and summer, with a range of salt water marsh.

Lake Peigneur is fresh and sweet, and abounds with fine fish.

Plantation will be sold with or without the Negroes (being thirty in number), and stock of every kind: Mules, Mares, Horses, Cows, Sheep, Oxen, Stallion, in large numbers.

TERMS: $15,000 cash, $18,000 assume loan from Citizen's Bank—the rest payable in three years without interest, or five years with interest.

* We commend this beautiful estate to the attention of those who may be disposed to invest in that garden spot of the world, the Attakapas region of Louisiana. The editor has visited the place himself, and cannot speak too highly of its advantages. Nothing could be more attractive in every respect. Information in regard to the estate, which can be bought on reasonable terms, may be had on application, post-paid, to the office of the Review, or to Mr. John J. Miller, New beria, Louisiana. A large portion of the tract is admirably adapted to the rice culture.—ED.

Valuable Sugar Plantation for Sale.—1701 Arpents on nearly Eight Years' Credit, without Interest.

A portion of the well known lands of Isaac Baldwin, in the Plaisance Settlement, eighteen miles above Alexandria, on Red River, with the following improvements: 600 arpents, well cleared and ditched, and abundantly fenced with cypress, and several bayous running through it (and one from the field). This land, with the exception of a very small portion, is far above the highest point the water has ever reached, and is thus secured forever against overflows. It is a historical fact, that in this settlement are the only alluvial lands in the Mississippi Valley that are not subject to inundation. The tract here offered for sale is nearly all susceptible of cultivation, and has great advantages for raising stock; the river here forming an angle gives a front to two sides of the tract and three miles in length, while the third and lower side line is formed by the large Bayou Darro, upon which is one of the best locations on the river for a saw mill.

These lands have always been highly productive, and are equal to any in the State for the culture of sugar cane, cotton and corn. In their vicinity are some of the largest sugar plantations in the parish, yielding an average of 1800 pounds of good sugar to the arpent. The tract will be sold a great bargain, and is offered on the following

TERMS: At $20 per arpent, payable as follows: one-eighth of the amount payable on the 15th of January in each of the years, 1850, '51, '52, '53, '54, '55, '56, and '57. Immediate possession will be given. In the event of the land not being sold before the 1st of January next, the proprietor would be willing to form a partnership with a gentleman who can furnish from 25 to 40 hands. For further particulars apply to JACOB RINGGOLD, Alexandria, La.

N. Rillieux's Sugar Apparatus.—Howard's Vacuum Pans.

To Planters who wish to make their Sugars entirely by steam, the *N. Rillieux Apparatus* is known to be the cheapest that has yet been introduced, and it is acknowledged, even by those persons using other kinds, as being superior as regards simplicity, economy of fuel, and in the perfection of the sugars made by it. Merrick & Towne make eight sizes of this Apparatus. Each Apparatus is composed of three vacuum pans, a pumping engine, the syrup and cane juice clarifiers—bone black filters required for each size—two blow-ups for molasses, wrought iron vats for filtered cane juice, syrup and molasses, all the connecting pipes, troughs, valves, cocks, &c.,—a bone black revivifier and small steam engine to carry it. The whole set up, complete and running, at the following prices.

The Terms: One-tenth cash, on delivery, and the balance out of the first and second crops.

Size	No. 1,	capable of making in 24 h.	6000 lbs.	first sugars,	$ 7,500
do	2	do	12000	do	11,000
do	3	do	18000	do	14,500
do	4	do	24000	do	18,000
do	5	do	30000	do	21,500
do	6	do	36000	do	25,000
do	7	do	42000	do	28,500
do	8	do	48000	do	32,000

These Apparatus do not require more room than kettles, nor is it necessary to have a new building for them. The brick and carpenter's work is to be done at the expense of the planter, and does not exceed five to eight per cent. of the above price for each Apparatus.

Messrs. Merrick & Towne, the builders of these Apparatus, having all the tools and necessary facilities, are prepared to furnish to planters any other kind of complete Steam Apparatus that they may want, upon cheaper terms than any other foundry in this country. They are ready to furnish either the Howard or Rillieux Vacuum Pans, delivered in New Orleans, complete, with all the cocks, valves, thermometers, vacuum gage, condenser and air-pump, lined with brass, at the following prices—

Size	No. 1,	capable of making	from 28 gal. syrup,	6000 lbs.	sugar,	$1,500
do	2	do	do	12000	do	1,760
do	3	do	do	18000	do	2,070
do	4	do	do	24000	do	2,330
do	5	do	do	30000	do	2,550
do	6	do	do	36000	do	2,820
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THE

COMMERCIAL REVIEW.

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ART. I.—KENTUCKY.*

DESCRIPTION OF THE COUNTRY; EARLY HISTORY AND MANNERS; SCHEMES FOR SEPARATION FROM VIRGINIA AND FROM THE UNION; MR. BURR, WILKINSON &c.; CAUSES OF WESTERN EXCITEMENT; POPULATION AND PRODUCTS OF KENTUCKY; AGRICULTURE OF KENTUCKY; DANIEL BOONE; MINERAL SPRINGS OF KENTUCKY; THE MAMMOTH CAVE; LEXINGTON, FRANKFORT, MAYSVILLE, LOUISVILLE; INTERNAL IMPROVEMENTS; EDUCATION AND SLAVERY IN KENTUCKY.

The fame of "Old Kentucky," whose hardy hunters and warriors, of yore, have been celebrated so much in national patriotic songs and legends, from the time when George Rogers Clark made his descent upon the savage tribes of the Wabash to that which saw, in all his "martial pomp," "John Bull" in the "low and murky places" of Louisiana, is not likely soon to be lost among the generations that are now passing upon the board. If the romance of hunter and border life has given way to civilization, scattered log huts and villages to mansions and crowded cities, dense forests to cultivated fields, Daniel Boone to Henry Clay—still is Kentucky famed for her hardy independence and fearless intrepidity, for her stalwart men and her handsome women, for her fruitful soil, her benign climate and the general and uninterrupted prosperity of her people.

> "The country is in some parts nearly level; in others not so much so; in others again, hilly, but moderately—and in such places there is most water. The levels are not like a carpet, but interspersed with small risings and declivities which form a beautiful prospect. The soil is of a loose, deep and black mold, without sand, in the first rate lands about two or three feet deep, and exceedingly luxuriant in all its productions. The country in general may be considered as well timbered, producing large trees of many kinds and to be exceeded by no country in variety. Those which are peculiar to Kentucky, are the sugar-tree, which grows in all parts, and furnishes every family with great plenty of excellent sugar. The honey-locust is curiously surrounded with large

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* Being on a visit of some weeks to Kentucky, we seized the occasion to prepare from observation, and from whatever documents are at hand, the paper now presented to the reader. With more time at command, we could have been more elaborate. From Mr. Collins's "Sketches of Kentucky, 1847," we have derived especial assistance, and make the acknowledgment once for all. In our next shall appear a paper on Florida, and then upon the other States. Will our friends favor us with articles upon *their* States. We have already, in our six volumes, published elaborate papers upon Massachusetts, New York, South Carolina, Alabama, Florida, Louisiana, Mississippi, Arkansas, etc.

thorny spikes, bearing long and broad pods in the form of peas, has a sweet taste and makes excellent beer. The coffee-tree greatly resembles the black-oak, grows large and also bears a pod in which is inclosed coffee. The pawpaw tree does not grow to a great size, is a soft wood, bears a fine fruit, much like a cucumber in shape and size, and tastes sweet. The fine cane, on which the cattle feed and grow fat, in general grows from three to twelve feet high, of a hard substance, with joints at eight or ten inches distance along the stalk, from which proceed leaves resembling the willow. There are many canebrakes so thick and tall that it is difficult to pass through them. Where no cane grows there is an abundance of wild rye, clover and buffalo-grass, covering vast tracts of country, and affording excellent pasture for cattle. The fields are covered with an abundance of wild herbage not common to other countries. Here are seen the finest crown imperial in the world, the cardinal flower, so much extolled for its scarlet color, and all the year, excepting the winter months, the plains and valleys are adorned with a variety of flowers of the most admirable beauty. Here is also found the tulip-bearing laurel tree, or magnolia, which is very fragrant and continues to blossom and seed for several months together. The reader, by casting his eye upon the map, and viewing round the heads of Licking from the Ohio, and round the heads of Kentucky, Dick's river, and down Green river to the Ohio, may view, in that great compass of above one hundred miles square, the most extraordinary country on which the sun has ever shone."*

In the geology of Kentucky the *blue limestone* occupies a conspicuous place. It forms the surface rock in a large part of the State, and is used for building purposes. Among the cliffs of the Kentucky river, is found an excellent *marble*, capable of fine polish. The cliff limestone is the base of the Ohio falls at Louisville. The *slate*, or shale, is very common, is bituminous, and supports combustion and contains iron pyrites and ores, giving rise to mineral springs. The sand, or *freestone*, extends from Danville to Louisville, etc., is used for purposes of art and even the construction of grindstones. The *cavernous limestone*, as its name imports, gives rise to many caves, the most famous of which, the *Mammoth*, we shall hereafter describe. The *conglomerate* or pudding stone, consists of quartz pebbles, rounded, and united with fine sand by a kind of natural cement. It underlies the coal formation. The *coal beds* of Kentucky are known as those of the Ohio and of the Illinois. They cover ten or twelve thousand square miles. The coal is very accessible but very little is mined, not perhaps, annually, more than 4 or 5,000,000 bushels. *Iron* is equally abundant in the State, but mostly neglected. It is commanded by navigable streams and must produce future wealth. An estimate of the quantity embraced has been fixed at 38,000,000.000 tons, "a quantity sufficient to supply a ton of iron annually to every individual in the United States, estimating them at 15,000,000, for 2,560 years." Small quantities of *lead* are traced in Kentucky. *Salt springs* abound in the sandstone formation, and a million bushels of salt is annually worked. *Saltpeter* and *plaster of Paris* are found in the caves. The mineral springs are numerous, embracing sulphur, blue lick, epsom, chalybeate, etc. The most fruitful soil of the State is that of the blue limestone formation—the country about Lexington and toward the Ohio is said to be the garden of the State.

It was not until the middle of the eighteenth century, that the Saxon foot-print was traced in Kentucky. The State was one great hunting-ground and battle-field for the savages of the North and the South. Among the earliest American explorers were Boone and Knox, and these, after incredible perils, returned to Virginia and Carolina, spreading every where the fame of the back-woods. Then came Thomas Bullitt, James Harrod and Richard Henderson. The foundation of Boonesboro was laid by Daniel himself, who had brought to the banks of the Kentucky River the first white women—his wife and daughters. Kenton, Calloway and Logan arrived. Kentucky was now made a County of Virginia, and, in 1777, the first court was held at Harrodsburg.

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* "Filson's Kentucky" in a supplement to "Imlays," 1784; see Collins.

We pass over the bloody strife with the Indian tribes, the invasion from Canada, of Du Quesne, the expedition of Clark against Vincennes, the perils and the heroism of the Kentuckians, during all of which adventurers were still crowding to their midst. "The rich lands of Kentucky," says a chronicle, "were the prize of the first occupants, and they rushed to seize them with a rapacity stronger than the fear of death."

In the early manners of the settlers of Kentucky, there is much that will interest our readers. We have, on another occasion, referred to the peculiarities of border life in the Great West,* and shall only add now to what we have already written—basing ourself upon the authority of "Doddridge's Notes."

The Kentuckian was altogether self-dependent, being excluded from intercourse with his Eastern neighbors. His table furniture was of wood, but never larder furnished better meats and butter, or stimulated keener appetite. With his guest he freely divided. He wore a hunting shirt—sometimes of skins—and a wallet for his provender and ammunition. The tomahawk and scalping-knife adorned his belt. A fur cap, leggins and deer-skin moccasins, completed his costume. His residence was a log cabin without floors, defended by walls, stockades and blockhouses, from the fierce savages. He married young and needed no fortune but his unerring rifle. His wedding was an epoch in the settlement. The ladies flaunted in their linsey petticoats, brogans and buckskin gloves. The marriage procession was unique. The whisky bottle performed its important part. The ceremony being performed, dinner followed, and then the dance, reels and jigs, until morning.

> "About nine or ten o'clock, a deputation of young ladies stole off the bride and put her to bed. This done, a deputation of young men, in like manner, stole off the groom and placed him snugly by the side of his bride. The dance still continued, and if seats happened to be scarce, every young man, when not engaged in the dance, was obliged to offer his lap as a seat for one of the girls, and the offer was sure to be accepted. In the midst of this hilarity, the bride and groom were not forgotten. Pretty late in the night some one would remind the company, that the new couple must stand in need of some refreshments; "black betty," which was the name of the bottle, was called for and sent up stairs, but often "black betty" did not go alone. Sometimes as much bread, beef, pork and cabbage, were sent along with her, as would afford a good meal for half a dozen hungry men. The young couple were compelled to eat and drink more or less of whatever was offered them."

Soon the whole neighborhood unite in building for the happy pair the needful log cabin: and thus, as log cabin after log cabin appeared, began the peopling of Kentucky. A race of hunters and yeomen and *freemen* sprung from that early stock, whose *epithalamium* was sung by wild forests, and whose morning slumbers were cheered by the melody of nature's choristers.

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*See Vol. IV, Com. Rev., Art. "GREAT WEST."

A review of the political history of Kentucky presents but few prominent land-marks. The war of the Revolution closed, but left the Kentuckians in constant fear of an Indian invasion. The citizens assembled at Danville, which became afterward famous for Conventions west of the mountains, soon discovered they were without the means of defense, and that a government at Richmond was too far off to be relied upon. Two other Conventions at Danville recommended a peaceable and constitutional separation from Virginia. The third Convention sent a petition to Richmond, and, in 1786, an Act was passed complying with the wishes of Kentucky. This act made some unfortunate provisions which caused great delays, as well as danger to the country. The Kentuckians looked upon the old federal government with great distrust, as being too weak to defend them from the Indians; and it was notorious, that the New England States, entirely at peace themselves, were desirous, for commercial considerations, to yield up the navigation of the Mississippi for twenty years, to Spain. Congress, from the fear of a standing army, would send no men to protect the frontier from savage warfare. Virginia could give no relief. Can it be wondered, then, that there was a deep feeling in Kentucky of self-defense, which sought a *separation by any means*, from such a federation, and *entire independence?*

A fourth Convention at Danville was attended with no better result than the three others, and Virginia had prolonged the time two years when Kentucky might be independent. To add to the ill-feeling occasioned by this, it was announced that John Jay was actually ceding the navigation of the river. Then were formed committees of correspondence, and the name of Jay was every where odious in the West.

A fifth Convention met, and on petition, a delegate to Congress was allowed by Virginia ; but the Constitution of the United States having been adopted, Congress turned over to the new government all action upon the claims of Kentucky. The whole State was again in a ferment, and, at this early period, the refusal of Congress was attributed, by able minds, to the jealousy of New England of any increase of *southern power.* This jealousy was expected to continue under the new government.

Taking advantage of such a state of things in the West, Spain proposed clandestinely through her minister, peculiar commercial favors and facilities to Kentucky, if she would erect herself into an *independent government.* At the very moment of the proposal, Gen. Wilkinson returned from New Orleans, where he had been on a mercantile adventure, with intelligence that he had secured the right of landing, selling and depositing tobacco there. He proposed to purchase all the tobacco, and gave out that Kentucky might command the trade of the river and of the South West, if she would be true to herself and her position. Then were party politics at their height, and the risks to the Union iminent.

A sixth and seventh Convention met at Danville. A separation, by violent means, from Virginia, was proposed. Wilkinson read a manuscript essay upon the navigation of the Mississippi, for which the Convention tendered *unanimous* thanks. Constitutional measures prevailed, and an address by Wilkinson was voted to Congress. An eighth and a ninth Convention assembled, and on the 4th of February, 1791, Kentucky was admitted into the Union.

Indian wars continued frequent on the frontier, and complaints of the inefficiency of the federal government were again heard. The whisky tax, too, became oppressive. The American policy toward the republicans of France was denounced in every cabin west of the mountains. Enthusiasm was at its height, and the agents of the mad minister Genet were received in triumph in the West. It was proposed to raise an army in Kentucky, to descend upon New Orleans. The people were rife for the movement. "Democratic clubs" were extending everywhere. Even the Governor could write to the Secretary of State: "I shall feel but little inclination in restraining or punishing my fellow citizens, etc., to gratify or remove the fears of a minister of a prince who openly withholds from us an invaluable right, and who secretly instigates against us a savage and cruel enemy." The old idea of *independence* was mooted again, but the storm passed over.

In the ten or twelve years which succeeded, and which included the period of negotiations for the navigation of the Mississippi, and then for the purchase of Louisiana, Kentucky was destined again to be agitated to her very center.

The treaty of 1795 with Spain, gave to the United States a deposit at New Orleans for merchandise, and the freedom of the river. Pending negotiations, the Governor of Louisiana had approached some leading citizens of Kentucky, with the view of a different treaty; but the matter was checked in its bud by the action at Washington. Judge Sebastian, it is said, was willing to go on, believing the regular treaty would not be ratified, or being, as is most probable, in the interests of Spain.

The faithlessness of the Spaniards was soon evident. An agent again appeared in Kentucky with the offer of artillery, small arms and munitions of war, money in large quantities, etc., etc., if inflammable documents were circulated calling for a separation from the Union—independence, etc.; if Fort Massac were seized, the federal troops everywhere dispossessed, and the northern boundary of Louisiana on the east of the river extended to the mouth of the Yazoo. This scheme of course received little countenance, for Kentucky had already achieved her darling object.

Seven years now passed in comparative quiet and prosperity, when the whole nation was excited by the intelligence that the Spaniards had violated the treaty by a denial of the right of deposit at New Orleans, without assigning any other point for that purpose. It was even announced that Louisiana had been ceded to France.

The purchase of Louisiana by the United States, would at once and forever have composed the turbulent elements of the West, but for the appearance there, at this period, of a man whose genius was of the most profound character, whose popularity had been wide, but whose career and ambition had been prematurely arrested. Aaron Burr was prepared for any great or desperate enterprise, and the West seemed to promise the widest field for his abilities. What the designs of Burr were, have never, perhaps, been fully divulged. The probabilities are that they have been exaggerated. We have little, if any, faith in the affidavit of Eaton, about the assassination of the President, corruption of the Navy, and violent overthrow of Congress.* The policy, if not the ambition or virtue of Burr, was opposed to this. The material that he could rely upon was entirely *in the West;* and within the bounds of a not very clearly ascertained national policy or duty, at that period, an army of adventurers might be found to precipitate themselves upon the Spanish colonies in the South-west, and entirely revolutionize them. The success of citizen Genet a few years before evinced this, but now the times were even riper, as Spanish troops, in the first heart-burnings of Spain after the cession of Bonaparte, had been ordered to our frontier, and an American army under Gen. Wilkinson was ready to check their advances—war with Spain daily apprehended.*

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* On his dying bed, thirty years after, he solemnly protested to Dr. Hossack, he had never meditated the dissolution of the Union.

Thus far the design of Col. Burr, though *unlawful*, was in no respect *treacherous*, and without even the knowledge of its unlawfulness, thousands were enlisted in the enterprise. Had he stopped here, it would be difficult to show in what respect he was more guilty than the men who raised armies among us for Texan independence, or entertained favorably the "*Sierra Madre*" *scheme.* Mr. Burr would then have appeared only *in advance of his times*, and with profound genius recognizing the necessity of a *more southern extension* of our territories, perceived long after by the statesmen who originated the Mexican war, and the people who almost universally applauded and approved *its results.* The rapacity of the American mind was so early perceived.

This southern republic or empire which loomed up so magnificently in the diseased mind of Col. Burr, was not intended to dispossess Spain, only. A part—it is difficult to say how much—of the territory lately purchased by our Government was to be included—*certainly, New Orleans.* This territory had been purchased in the face of a violent opposition from a powerful party. The Americans had no knowledge of the importance of the purchase and had no love for it. In the event of war with Spain, was there no chance of a re-cession? The free navigation of the river and the right of deposit being all that was desired, would Congress care who exercised the sovereignty? Was there no hope that Government, despite of the cost of Louisiana, might acknowledge its independence, should a sufficient power be established there? We have heard, even in our day, leading statesmen speak with complaisance of ceding back the purchased territories of New Mexico and California; without equivalent we must suppose—for what could Mexico pay?

We throw out these views, not so much to exhonerate Mr. Burr (a defense of whom we have never read, who was, without doubt, not very scrupulous in the pursuit of his ends, or in the character of them, but who has, it is not at all improbable, been abused far more than he deserves, a common fate with most intriguers), as to rescue the fame of many who were disposed to favor and co-operate with him.

It is difficult to fix precisely the position occupied by Gen. Wilkinson in all these matters. From his first appearance in Kentucky, he took an active part in its politics, and being an able and ambitious man, was calculated to have a wide influence in the then forming society. He found the Kentuckians restive under the rule of Virginia, and readily united with them in the legitimate purpose of separating from her. Ardent, impulsive and impatient of results, which, from various causes, were tediously protracted, and which appeared at times not likely to be realized at all, he took an active part with many leading citizens in favor of separation at once and by any means. The patriot was not so much at fault here, perhaps, as the citizen. Kentucky was not unwilling, on many occasions, to *acknowledge the patriotism* and *adopt the services* of General Wilkinson.

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* Mr. Burr owned a large share of the "Bastrop grant," originally made by the Spaniards in the South West, and held out an intention of colonizing it. He often told his daughter she should be "Queen of Mexico."

After the question of Kentucky's separate existence from Virginia became complicated by the new and exciting questions of the navigation of the Mississippi and the deposit at New Orleans, the enterprising spirit of Wilkinson led him into a commercial adventure to Louisiana, where, without doubt, he listened to overtures from the Spanish authorities, and perhaps about the same period began to think not unfavorably of the plan entertained by many, of a complete separation of Kentucky from the Union. Before visiting with bitter denunciation this conduct, there are many things which ought to be considered. The old confederation, during its existence, was utterly impotent in affording protection to the West. The republicans of the West, like those of some of the eastern States, looked with great jealousy upon the consolidating character of the *new* and federal and *constitutional* Union of 1789. Many of the States refused, for a long time, to come into such a Union at all. The course of some of the eastern States, in disregarding the interests of the West, had excited disgust and alarm. Would the new government be more propitious to the West, whose wants it could scarcely understand or appreciate? In those days many good and wise men all over the country doubted of the success of the federal experiment. In the difficulties, the almost impossibilities of communication between the eastern States and those beyond the mountains, was it not at least improbable that a *federal* system, then so little understood, could have included them all under a sound, equal and republican government? Men might well have doubted, as they now doubt, whether Oregon and California can be retained under our system, should there be any very powerful adverse temptations. If such a doubt can be expressed now, how much more probable when the power of steam by land or by water lay dormant, and a passage from New Orleans or Louisville to Washington was even more hazardous, protracted and expensive, than to San Francisco or to China, perhaps, when our *railroad* shall be completed!

Whilst Wilkinson was listening to the overtures of the Spaniards at New Orleans, it is probable he lent an ear also to those of Col. Burr, whose schemes were of course the very opposite. In neither case is it evident that he took a very decided and active part, and, although there is little doubt that the independence of the West occupied a place in his mind, we have not been able, from the history of the times, to find him committed in any criminal manner. In the condition of the country, it was natural to look any where for relief. A far-seeing man might well have deemed it important to conciliate the Spaniards, in the then infant state of the West, and to give an under show of countenance to the designs of Burr, to keep the Spaniards in check. If Wilkinson *coquetted*, he did only what a late President of Texas boasted; and if he went too far on either side, it should be reflected how almost impossible is the *mean*, and how difficult, and even dangerous, the game to be played. We will not go further than this, and accuse the old soldier of any want of high and patriotic regard for his country, or of any act which he believed would in the slightest degree redound to her injury.

Having thus gone more at length into the discussion of the early and stormy politics of Kentucky, and the West, than was intended or might be justified, we shall now proceed to consider the physical characteristics, agriculture, commerce, and wealth of the State.

I. POPULATION OF KENTUCKY.

Years.	Blacks.	Total Population.
1790	12,430	73,677
1800	43,344	220,959
1810	80,560	406,511
1820	120,732	564,317
1830	165,350	688,844
1840	182,258	779,828
1850, approx.	——	881,863

Of the blacks, in 1840, 7,317 were free. The whole number of blacks in Kentucky is perhaps not much greater than in 1840.

II. POPULATION OF CHIEF TOWNS OF KENTUCKY.

	1810.	1820.	1830.	1840.	1847.
Louisville	1,357	4,012	10,352	21,210	40.000
Lexington	4,226	5,279	6,104	6,996	8,000
Maysville	335	1,130	2,040	2,741	5,000
Frankfort	1,099	1,679	1,680	1,916	2,500
Covington					6,000

III. REVENUE STATISTICS OF KENTUCKY.

In 1845, land, acres, 17,879,148 ; value of lands, $109,991,650 ; lots, $21,266,249 ; slaves, $52,372,139; jennies, $86,410; mules, $684,504; cattle, $1,290,216; stores, $6,363,359 ; horses, $10,294,922.

In 1846, land, acres, 18,502,903 ; value of lands, $116,785,543 ; lots, $23,270,561 ; slaves, $55,003,861 ; jennies, $91,897 ; mules, $898,603 ; cattle, $1,584,994 ; stores, $6,855,863 ; horses, $10,598,042.

The number of slaves had increased 1,840 in one year; the number of horses and mares increased from 358,567 to 361,828; number of mules, from 21,277 to 28,806; jennies, from 2,169 to 2,276; cattle, from 435,956 to 457,403; stores, from 2,498 to 2,759.

The whole value of the above articles, including the effects of the equalization law, about 27 millions, was, in 1846, estimated in taxation at $242,388,967. The whole revenue from taxes, $383,283. The average value of land in the State was estimated at $6.31 per acre.

IV. VALUE PRODUCTS BY CENSUS OF 1840—MANUFACTURES.

Machinery product,	$46,074	Liquors (capital invested),	$315,308
Hardware,	22,350	Soap and candles,	28,765
Precious metals,	19,060	Glass, earthen-ware, etc., pro.	24,090
Other metals,	164,080	Confectionery,	36,050
Granite,	8,820	Powder (cap. invested),	42,000
Brick and lime,	240,919	Drugs, etc.,	16,630
Woollens,	151,246	Cordage, product,	1,292,276
Cottons,	329,380	Paper,	44,000
Silk manufactures,	819	Printing and binding (cap.),	86,325
Flax manufactures,	7,519	Carriages and wagons, pro.,	168,724
Mixed manufactures,	127,875	Mills—their product,	2,437,947
Tobacco,	413,585	Household furniture, product,	273,350
Hats, etc.,	201,310	Houses built, val. in 1 year,	1,039,172
Tanneries, etc.,	732,646	Other manufactures,	697,029

V. ESTIMATED PRODUCT AGRICULTURE, 1846.

Bushels wheat,	4,769,000	Tons hay,	123,000
" Barley,	15,400	Tons flax and hemp,	22,500
" Oats,	13,091,000	Pounds tobacco,	63,310,000
" Rye,	2,548,000	" Cotton,	1,400,000
" Buckwheat,	14,000	" Rice,	17,000
" Corn,	54,625,000	" Silk cocoons,	6,970
" Potatoes,	1,508,000	" Sugar,	2,100,000

The chief agricultural products of Kentucky, it will be perceived, are Indian corn, tobacco and hemp, and these are in sufficient quantities to give the State character as a great agricultural producer. In this is centered her chief source of wealth. Her cattle and stock, we have also seen, are important interests.

We have desired to furnish the readers of our review a paper upon the most improved methods of cultivation and manufacture of tobacco and hemp in the western States, and applied, not long since, to the Hon. Henry Clay for the desired information. Mr. Clay, with the true characteristics of his high and generous nature, and unlimited public spirit, handed us a copy of an inestimable publication, entitled "*Essays* on Practical Agriculture," etc., by Adam Beatty, Vice President of the Kentucky Agricultural Society. Among these Essays are several prize papers upon the subjects desired, as also upon several others of the first importance. As space admits, hereafter, we shall make large extracts from the volume.

According to an authority, the first English cattle brought to Kentucky were from the stock of Mr. Patton, of Virginia, who imported, in 1782, bulls of the long-horned or beef breed, and also a cow of the short-horned or milk breed. The first stock of Kentucky was, therefore, a cross of the milk and beef breed, and this constitutes the basis of most of the English cattle now in the State. Mr. Beatty controverts the statement, and maintains "the cows of Mr. Patton's stock were only *part* blooded, without the admixture of short-horned or milk breed. In 1803, a bull of the Miller stock was introduced from Virginia, which, with the cows from Patton, produced unquestionably the best milkers that have ever been in Kentucky, little inferior in form to the present most approved stock, and of greater size." It was not before 1817 that English cattle were imported directly from England into Kentucky. Mr. Sanders introduced four short-horned bulls, the same number of cows, and also two bulls and two cows of the long-horned. Mr. Clay, on his return from Ghent, brought over some Hereford cattle, esteemed by some superior to the short-horned Durham. The importations came now to be very frequent, and the result is the splendid and unrivalled cattle of Kentucky. The Merino breed of sheep was introduced into the State by Seth Adams, in 1809, and in 1829, Mr. Clay brought from west Pennsylvania a flock of fifty full bloods.

Mr. Beatty gives this view of the progress of agriculture in Kentucky:

> "The first settlement of Kentucky may be regarded as the hunter State. Though cattle could easily have been raised by grazing them on the natural pastures in the summer and upon the extensive canebrakes in the winter, if the inhabitants had been living in a state of peace, yet such was not their condition. Surrounded by a savage foe, who was ever on the watch to seize upon the property or take the lives of the settlers—if they had raised cattle to any extent, it would only have been for the use of the enemy, and the better to enable him

to prolong his predatory incursions, and thereby do them the greater mischief. Thus situated, they could rear no more cattle than they could secure within their stockade forts in time of danger A few cows for milk and butter, and as many of the young as were necessary to keep up the stock, and to supply the emigrants, was as much as they could aim at, in the early period of our history. But game was plenty, and the same rifle which was necessary for their protection, was amply sufficient to afford an abundant supply of bear, deer and buffalo meat. The whole system of husbandry, at the first settlement of the country, was to raise a little Indian corn for bread or hominy, around the fort and within the protection of the garrison. But when the population had so far increased as to enable the settlers to act on the offensive, as well as the defensive, they could embody and meet the Indians in their advance, or pursue them in their retreat, and frequently inflict severe retaliation upon them. This had the effect of making the enemy embody in larger parties, and to diminish the frequency of their predatory expeditions. As the settlers began to feel their strength, they enjoyed a greater sense of security, and consequently extended their efforts in raising supplies of agricultural products, for the use of their families, and to supply the wants of the emigrants to the country. But a considerable period elapsed before any thing of the grain kind was raised, except Indian corn. The want of mills to grind wheat was an obstacle to the cultivation of that crop. But the great fertility of the soil and the demand for corn, as an article of subsistence for the settler and his stock, as well as to supply the wants of the emigrant, held out strong inducements for its cultivation It was not until a commercial communication was opened with the Spaniards, at New Orleans, that wheat and tobacco began to be objects of importance. From this period the culture of those articles began to assume some importance. But there was, as yet, little or no system in the husbandry of the country. A part of the corn ground might be sowed broad cast, among the standing corn in the fall, and reaped in July following and the balance of the cleared ground cultivated in corn the succeeding year, and that sowed in wheat the following autumn. The wheat stubble the year after the harvesting of the wheat, might be plowed for corn, and so on in succession. Whilst some new ground cleared for tobacco would serve for that crop. Others again cultivated corn only, in continued succession, without any change. Such was the system (if system it could be called) of cropping that generally prevailed, until a late period of the history of our State. As fertile as our soil naturally is, it began at length, to show the effects of a bad system of husbandry. To remedy this deterioration of soil, something better deserving the name of system began to prevail among the more judicious farmers of the country."

We shall now remark briefly upon the prominent objects of interest in the different counties of Kentucky, and begin with the *mammoth remains*, at the Big Bone Lick, near the Ohio river.

"In 1773 the Lick was first visited. There were no trees or herbage, but large numbers of mammoth bones scattered over the ground. Since then large quantities have been exhumed. Some of the teeth weigh near ten pounds and expose a chewing surface seven inches long and four broad. Some of the tusks were eleven feet long and at the butt seven inches in diameter—thigh bones four or five feet in length—ribs four and five inches broad and distance apart sometimes five feet. These ribs were formerly used for tent poles. Distance across the forehead of a supposed young animal and between the eyes two feet; depth of tusk sockets eighteen inches; length of tusk eight feet. 'The first collection of these fossil remains was made by Dr. Goforth, in 1803, and in 1806 was entrusted by him to the English traveler Thomas Ashe, to be exhibited in Europe, who, when he arrived in England, sold the collection and pocketed the money. The purchaser afterward transferred part of this collection to the Royal College of Surgeons, in London, to Dr. Blake of Dublin, and Professor Monroe of Edinburgh; and a part was sold at auction. The next collection was made by order of Mr. Jefferson, while he was president of the American Philosophical Society, about the year 1805, and was divided between that society and M. Cuvier, the distinguished French naturalist. A third collection was made in 1819, by the Western Museum Society. In the year 1819 a fourth collection was made, by Mr. Finnell. This was first sold to a Mr. Graves, for $2,000, and taken by him to the eastern States and there sold for $5,000.' The mammoth is considered by geologists the last animal destroyed *before the creation of man*."

The name of Boone county is from the famous pioneer of that name, whose romantic history is familiar to most persons, and was traced by us in the fourth volume of the Review, when treating of the great West. The following letter from Boone to Judge Cobren will evince that not letters only give immortality.

> "The Later I Recd from you Respecting Squire Boones Surtivatc Was Long Coming to hand and my Not being able to go to St Lowis I Dunn the Bisness before Col Keebby and Sent it on by Lewis Bryan in Closed &c &c. If that Will not Dow pleas Wright to me &c. I am well in halth But Deep in Markury & Not able &c. I Shall Say No thing about our petistion &c.
>
> "Youres DANIEL BOONE."

In Boyle county there is at Danville a deaf and dumb assylum and a college which has since 1819 educated about 1,200 students. In Cumberland county, on the bank of Cumberland river, an *oil well* was discovered in 1830. The oil spouted up to fifty feet above the surface when struck; and, covering the surface of the river for miles, was, by the application of a torch, made to present the singular spectacle of a river on fire. It was found to be useful only medicinally and is bottled and exported for that purpose. In Edmonson county is that extraordinary curiosity, the MAMMOTH CAVE. It is situated midway between Louisville and Nashville, and is a fashionable place of resort. The cave is approached through a romantic shade. At the entrance is a rush of cold air, a descent of thirty feet by stone steps, and an advance of one hundred feet inwards brings the visiter to the door, in a solid stone wall which blocks up the entrance of the cave. A narrow passage leads to the great *vestibule* or antechamber, an oval hall, two hundred by one hundred and fifty feet and fifty feet high. Two passages of one hundred feet width open into it, and the whole is supported without a single column. This chamber was used by the races of yore as a cemetery, judging from the bones of gigantic size which are discovered. "Far up, a hundred feet above your head, you catch a fitful glimpse of a dark, grey ceiling, rolling dimly away like a cloud, and heavy buttresses apparently bending under the superincumbent weight project their enormous masses from the shadowy wall. The scene is vast and solemn and awful. A profound silence, gloomy, still and breathless, reigns, unbroken by even a sigh of air, or the echo of a drop of water falling from the roof. You can hear the throbbings of your heart and the mind is oppressed with a sense of vastness and solitude and grandeur indescribable." In *Audubon Avenue*, leading from the hall, is a deep well of pure spring water. It is surrounded by stalagmite columns from the floor to the roof. The *Little Bat Room* contains a pit two hundred and eighty feet deep, and is the resort of myriads of bats. The *Grand Gallery* is a vast tunnel many miles long and fifty feet high and as wide. At the end of the first quarter of a mile is found the *Kentucky Cliffs* and the *Church* one hundred feet in diameter and sixty-three feet high. A natural pulpit and organ-loft are not wanting. "In this great temple of nature religious service has been frequently performed, and it requires but a slight effort to make the speaker heard." The *Gothic Avenue* is reached by a flight of stairs and is forty feet wide, fifteen high and two miles long. The ceiling is smoothe and white. Mummies have been discovered here, which have been a subject of curious study to science. In the Gothic Avenue are also stalagmites and stalactites, *Louisa's Bower* and *Vulcan's Furnace*. On the walls of the ***Register Rooms*** are inscribed thousands of names. The ***Gothic Chapel*** is "one of surprising grandeur and magnificence, and when brilliantly lighted up by the lamps, presents a scene inspiring the beholder with feelings of solemnity and awe." At the foot of the ***Devil's Arm Chair*** is a small basin of sulphur water. Then we have ***Napoleon's Breastwork***, the ***Elephant's Head***, ***Lover's Leap***, ***Gatewood's Dining Table***, and the ***Cooling Tub***, a basin six feet wide and three deep, of the purest water, ***Napoleon's Dome***, etc.

The ***Ball Room*** contains an orchestra fifteen feet high; near by is the row of cabins for consumptive patients—the atmosphere being always temperate and pure. The ***Star Chamber*** presents an optical illusion. "In looking up to the ceiling the spectator seems to see the firmament itself, studded with stars and afar off a comet with bright tail." We pass over the ***Salts Rooms***, ***Black Chambers***, ***Fairy Grotto***, etc., and come to the TEMPLE.

> "The temple is an immense vault, covering an area of two acres and covered by a single dome of solid rock, one hundred and twenty feet high. It excels in size the cave of Staffa and rivals the celebrated vault in the Grotto of Antiparos, which is said to be the largest in the world. In passing through from one end to the other, the dome appears to follow the sky as in passing from place to place on the earth. In the middle of the dome there is a large mound of rocks rising on one side nearly to the top, very steep and forming what is called the *mountain*. When I first ascended this mound from the cave below, I was struck with a feeling of awe, more intense and deep than any thing I had ever before experienced. I could only observe the narrow circle which was illuminated immediately around me; above and beyond was apparently an unlimited space, in which the ear could not catch the slightest sound, nor the eye find an object to fasten upon. It was filled with silence and darkness; and yet I knew that I was beneath the earth and that this space, however large it might be, was actually bounded by solid walls. My curiosity was rather excited than gratified. In order that I might see the whole in one connected view, I built fires in many places of cane which I found scattered among the rocks. Then taking my stand upon the mountain, a scene was presented of surprising magnificence. On the opposite side the strata of grey limestone breaking up by steps from the bottom, could scarcely be discerned in the distance by the glimmering. Above was the lofty dome, closed at the top by a smooth oval slab, beautifully defined in the outline, from which the walls slope away on the right and left into thick darkness. Every one has heard of the dome of the Mosque of St. Sophia, of St. Peter's and St. Paul's; they are never spoken of but in terms of admiration, as the chief works of architecture and among the noblest and most stupendous examples of what man can do when aided by science; and yet, when compared with the dome of this temple, they sink into comparative insignificance."
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> "The RIVER HALL descends like the slope of a mountain; the ceiling stretches away, away before you, vast and grand as the firmament at midnight. Proceeding a short distance, there is on the left a steep precipice, over which you can look down by the aid of blazing missiles upon a broad, black sheet of water, eighty feet below, called the Dead Sea. This is an awfully impressive place, the sights and sounds of which do not easily pass from memory. He who has seen it will have it vividly brought before him by Alfieri's description of Filippo. Only a transient word or act gives us a short and dubious glimmer that reveals to us the abysses of his being—daring, lurid and terrific as the throat of the infernal pool. Descending from the eminence by a ladder of about twenty feet, we find ourselves among piles of gigantic rocks; and one of the most picturesque sights in the world, is to see a file of men and women passing

along those wild and scraggy paths, moving slowly—slowly, that their lamps may have time to illuminate their sky-like ceiling and gigantic walls—disappearing behind high cliffs—sinking into ravines—their lights shining upward through fissures in the rocks—then, suddenly emerging from some abrupt angle, standing in the bright gleam of their lights, relieved by the towering black masses around them. As you pass along you hear the roar of invisible waterfalls; and at the foot of the slope the river Styx lies before you, deep and black, overarched with rocks. Across, or rather down, these unearthly waters, the guide can convey but four passengers at once. The lamps are fastened to the prow, the images of which are reflected in the dismal pool. If you are impatient of delay or eager for new adventure, you can leave your companions lingering about the shore and cross the Styx by a dangerous bridge of precipices over head. In order to do this you must ascend a steep cliff and enter a cave above, over three hundred yards long, from the egress of which you find yourself on the bank of the river, eighty feet above its surface, commanding a view of those in the boat and those waiting on the shore. Seen from the heights, the lamps in the canoe glare like fiery eyeballs; and the passengers sitting there, so hushed and motionless, look like shadows. The scene is so strangely funereal and spectral, that it seems as if the Greeks must have witnessed it before they imagined Charon conveying ghosts to the dim regions of Pluto."

The Mammoth Cave is said to be explored to the distance of ten miles without reaching its termination, whilst the aggregate width of all the branches is over *forty miles!* Next to Niagara it is the greatest wonder of nature in the western world, or perhaps throughout all her domains.

The city of LEXINGTON is situated in Fayette county, and was incorporated in 1782. It is handsomely laid out, and in the midst of a beautiful country. The taxable property is $3,039,000. Hemp is extensively manufactured here, and there are fifteen establishments for the purpose, working six hundred hands, running ninety looms, making annually 2,500,000 yards bagging and 2,000,000 lbs. rope. In the suburbs and neighboring country there is as much more manufactured. Here is situated the *State Lunatic Asylum* and *Transylvania University.* The latter contained a literary department once of great influence, but now fallen very much to decay. The medical and law schools are still in successful operation. Here is published the *Gazette*, the oldest paper except that at Pittsburgh west of the mountains. In the suburbs is *Ashland*, the seat of Henry Clay.

FRANKFORT is sixty miles above the mouth of the Kentucky river, making a beautiful appearance as we approach. This is the capital of the State, and the government was located here in 1792. Here, also, is the State penitentiary, containing an average of about 170 inmates. It is farmed out and the keepers pay over to the State two-thirds of the profits, guaranteeing that these profits will not fall short of $5000 annually. The heaviest business of the convicts is the manufacture of bagging and rope. In the public cemetery of Frankfort were lately deposited the remains of *Daniel Boone*, brought from Missouri by act of Legislature and interred with great funeral pomp.

Five miles from Frankfort at Franklin Springs, is located the KENTUCKY COLLEGIATE AND MILITARY INSTITUTE, under the superintendence of Col. Francis W. Capers, an eminent tactician and scholar. The position is a commanding, healthy and picturesque one. The grounds are well laid out and the buildings of the most extensive and substantial character, capable of accommodating two hundred students. The number now in attendance, though not large, is continually increasing from all sections of the West and South-west. Col. Capers is sustained by a competent faculty, and will, we have no doubt, raise the institution to the very highest point.

LOUISVILLE, the metropolis of the State, is well laid out, is an important mart and contains some of the finest private residences in America. We were struck with the shaded beauty of the streets and the general elegance of structure. There are thirty churches, a medical institute which attracts over 300 students, an asylum for the blind, a university still in its infancy, but containing a law department, a hospital, several banks, mercantile and historical library, &c. The export and import of the place is estimated at $50,000,000 annually. There are numerous bagging, cotton and wool factories, flouring mills, founderies, tobacco stemmeries, paper mills, &c., twelve newspapers and periodicals. The town was originally laid off by Captain Thomas Bullitt of Virginia. The *Canal* round the falls of the Ohio is at Louisville. As early as 1804 a company was chartered to build this canal, but nothing was done until 1825 and the canal only finished in 1833. Its effect on commerce was supposed prejudicial to Louisville. The government of the United States owns stock in the company, which is said to pay good dividends. The charges for toll are enormous and the canal entirely too small for its purposes. For further and more full description of Louisville the reader will consult the first volume of our Review, 1846.

MAYSVILLE is situated on the Ohio, sixty miles above Cincinnati, and was established in 1788 and incorporated in 1833. It is a thriving town, the largest hemp market in the country and an important depot for the commerce of north-east Kentucky.

The *Harrodsburg Springs*, 35 miles from Frankfort, is now the most famous fashionable watering place in all the West. The accommodations are extensive and splendid, and the country around possessed of every natural beauty.

The *Blue Lick Springs*, near Carlisle and 58 miles from Frankfort, have also a wide fame. The waters are highly medicinal and are an extensive article of commerce, in barrels, throughout the West. They are strongly purgative. The main hotel is an extensive and magnificent structure and thousands are annually attracted here. There are also sulphur springs in Grayson county, said to be the purest and best in the United States, and also at Drennon's Lick, 70 miles from Louisville. In Hart county natural curiosities are said to abound, as the following description will evince.

> "There is a large spring near Green River, which at certain hours of the day rises twelve or fifteen inches above its level, and then gradually recedes again, resembling the ebb and flow of the tides. The flood occurs at the hour of twelve each day—recurs at the same hour every day and is marked by the utmost uniformity in the time occupied in ebb and flow. Near Munfordville a circular hole, sixty feet in diameter, runs down into the earth in funnel shape. Thirty feet below the surface its diameter is about ten feet. The depth is unknown, and on throwing down a rock it will ring against the sides, fainter and fainter without appearing to strike bottom. A hundred cart loads of rocks have been thrown in by visitors, without the least effect. There is another hole, called 'Frenchman's Knob,' which has been explored 275 feet, by men descending with ropes, without reaching bottom."

Georgetown, in Scott county, is the seat of a flourishing college with over 100 students. There is also a female institute here, and a military institute under Col. Johnson. We understand that they are both prosperous, and regret that circumstances have not yet allowed us to visit them, so as to form any opinion.

Kentucky has but few *public works* except her turnpikes and the "lockings" of some of her rivers, of much value. The State owns about 400 miles of turnpike road stocks, 29 miles of railroad and 290 miles of slackwater navigation, yielding in all about $135,000. Her public debt is $4,618,735 86. A railroad is now in course of construction between Louisville and Lexington.

The system of *public education* as in other southern States is not very perfect. Although the number of acadamies and colleges is considerable throughout the State, complaints of the school system are heard. We have before us the report of Mr. Breckenridge the superintendent, for 1849. It appears the question was submitted last year, to the people, if they would be taxed the *one-fifth part* of *one mill to the dollar*, on all taxable property, for the establishment of a common school system, and decided in the affirmative by a large majority. Including this tax, the whole revenue for school purposes is estimated at $120,000 per annum. The report of the superintendent is very imperfect and shows that out of 183,458 children, 31,501 only are reported in attendance. We cannot infer how many attend without being reported. Despite of all these difficulties, however, Kentucky has given many eminent citizens to the republic of native birth or adoption. Among these are twenty governors and lieut. governors of other States, thirteen ministers and charges to foreign powers, one president of the United States (Taylor), one vice-president, ten cabinet officers, three major generals of the army, eleven judges United States and other State courts, nine senators, eight presidents of colleges in other States, &c.

The State, as we have seen, has nearly 200,000 slaves—about one-fourth of the population. The question of *emancipation* is now in agitation and a convention will soon pronounce upon the subject. What the result will be we are very clear. Although it be demonstrable that free labor would be more advantageous to Kentucky than slave labor, which we are not prepared to admit, but which might be true without affecting the question in the more southern States, yet Kentucky is by no means prepared for emancipation; with such a proportion of blacks it is impossible that she can be. She would not incur the perilous risk of retaining in her midst such an army of lazy, worthless *free negroes*, as would result. It would be a blight upon the prosperity of the State not easily to be overcome—an army of paupers which no wealth could sustain. To send them off by colonization is a scheme altogether impracticable in such magnitude. Kentucky "*must be free*" we admit, but it will be when the superior southern demand shall draw off by degrees her slaves, and the continued increase of white population shall make the relative proportion of colors but a fraction of what it now is, and altogether unimportant.

ART. II.—NEGRO SLAVERY AT THE SOUTH.

EARLY HISTORY OF NEGRO SLAVERY; SLAVERY IN THE STATES; THE BIBLE QUESTION OF SLAVERY; PHYSICAL CHARACTERISTICS OF THE NEGRO; SAFETY OF THE SLAVE INSTITUTION; FIDELITY OF NEGRO SLAVES; SLAVERY COMPARED WITH ENGLISH POOR LABOR; MISERY OF BRITISH OPERATIVES, ETC.

[The following original paper we shall publish in two equal parts in the pages of our Review. Coming from the pen of a northern man, born and educated amid influences in the highest degree obnoxious to our institutions and policy, it has a peculiar value. The author has read almost every thing published upon the subject, and availed himself of the light afforded in one general acknowledgment. He has also traveled extensively at the South, on an agricultural tour, and proved himself in most respects an accurate observer and faithful witness. In a periodical like ours, it is important to give full and particular information in regard to the institution of slavery, so important, as it is, in the the destinies of nearly half the States of the Union. When the present paper is concluded, we shall republish the admirable letters of Gov. Hammond, of South Carolina, to Thomas Clarkson, which are nearly out of print, and which are worthy of perpetual preservation.—ED.]

I would premise, that my object is neither to advocate slavery or its abolition; but rather to give a plain narration of facts, from which every one may draw his own conclusions.

First, then, let me give a short historical view of the origin of what a majority of the citizens of the United States, as well where slavery exists as where it does not, regard a great evil.

Perhaps every one is aware that negro slavery commenced in this country while we were but a colony of Great Britain, and at a time when few, if any, thought it was such a henious sin as it is now denounced in some quarters, or that it would ever reach its present magnitude. Could the wise fathers who framed our national constitution, have had a prospective vision of the present, it is probable they would have inserted some provision to prevent its extension.* But so little did

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* The first slaves introduced, were twenty in number, from a Dutch man-of-war from the coast of Guinea. They were landed for sale in the colony of Virginia, on James River, in August, 1620, 225 years ago. Negroes constituted an article of traffic, more or less, in all the colonies. At the time of the Declaration of Independence, in 1776, the whole number was estimated at 500,000, viz:

In Massachusetts,	3,500
Rhode Island,	4,373
Connecticut,	6,000
New Hampshire,	620
New York,	15,000
New Jersey,	7,600
Pennsylvania,	10,000
Delaware,	9,000
Maryland,	80,000
Virginia,	165,000
N. Carolina,	75,000
S. Carolina,	110,000
Georgia,	16,000
Total in 1776	502,132

Since then slavery has been abolished in the first seven States above named.

they then fear, that the importation of slaves was permitted until the year 1808, about the time it was also prohibited by Great Britain. Although the citizens of that government are now harsh against us for permitting the existence of slavery in our republic, it ought to be borne in mind, that it was Britain who fixed the institution so indelibly upon us. She began the traffic in the reign of Queen Elizabeth, though slavery had undoubtedly existed in some form from the earliest history of that nation. In fact, it has existed from the earliest periods of history, and I have no doubt will continue to exist to its latest period. Notwithstanding the importation of negroes is prohibited by nearly all the civilized nations of the earth, it is still carried on in a contraband manner, to an enormous extent. It is estimated that 40,000 slaves annually leave the coast of Africa. It is not likely that many of them ever reach the United States. Cuba, Porto Rico and Brazil, being the great slave emporiums of the present day; but we undoubtedly feel the effects of the trade, for were it not for that source of supply, these countries would draw the surplus from ours, in spite of all laws that might be enacted to prevent it.

For my own part, I have no doubt that while the negro continues to exist, he will continue to be enslaved by the white man, as it has been for almost unknown ages; for it is a fact, that long before the time when European ships first visited the coast of Africa, the negroes had been carried away, by the Arabian caravans, to serve the pale faces of the North. Would it not be well to inquire why the negro race has always been subjected to the condition of slaves by the whites?

And to avoid the charge of plagiarism, let me here state that I shall quote many items from various authors who have treated upon this subject, and give them as authority, once for all.

> "It has long been a favorite theory of many philosophers, that the negro races are naturally inferior in point of intellect, and do not possess the same capacity for improvement as the Europeans, or people of Caucasian variety. This supposition, however, has been vehemently denied, and it has been contended, over and over again, that the peculiar circumstances under which they have been placed sufficiently account for the condition of the Africans—for their want of a literature, and their degraded and low scale of civilization, and brutal and savage existence.
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> "That great weight should be attached to these circumstances, I am willing to admit, but wholly deny they have produced the existing state of things. It is a well known historical fact, that ancient Egypt was, at one period, the principal seat of science, literature, arts and civilization, and that the various nations or tribes of the African race were in close contact, and had a pretty extensive intercourse, not only with the Egyptians, but also with the Phœnicians, and afterward with the Romans. What did they profit by this association? Literally, nothing. For while the then almost equally barbarous people of Greece, Asia Minor and Magna Græcia, raised themselves, in a comparatively brief period, to the highest civilization and refinement, the negro race of Africa continues, with-

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The census of 1790 exhibited 697,897 slaves, and 59,460 free persons of color.

In 1800, slaves	893,041
1810, "	1,191,364
1820, "	1,538,064
1830, "	2,009,031
1840, "	2,487,455

The importation of slaves has been prohibited since 1808; consequently, the addition ascertained every census, is from natural increase.

but one single solitary exception, down even to the present day, immersed in the greatest barbarism.

"It is not possible that, during the space of 3 or 4,000 years, opportunities have not been afforded some of them to make some slight advances in the scale of human improvement. Is there any proof that they have had the sagacity that is inherent in the Caucasian family, to profit by contact with more favored nations?

"It appears to me a fact, that Africa has not produced a single name worthy to rank with the heroes and sages of the world.

"Although wrapt in the darkest superstition and worship of idols, we look in vain for the honors and public gratitude which other rude, though improving, nations are wont to bestow upon departed heroes, legislators, and authors of important discoveries in the arts."

Because a few of the negroes among us do occasionally exhibit bright intellectual qualities, many good philanthropists have been led to believe that the whole race might be elevated to the same standard, and have come blindly to the opinion that the first great necessary step to bring about this wonderful result, will be to declare them FREE, and insist that they are EQUAL to the white race.

Are these good but erring men aware, that there is almost as much difference between the different tribes of the negro race as there is between the blacks and whites?

For instance, the Jolofs seem to be almost a distinct race of negroes, and have been a comparatively civilized people from the era of their first discovery by the Portuguese.

"Those of Guber and Hausa, where a considerable degree of civilization has long existed, are, perhaps, the finest race of genuine negroes in Africa, unless the Jolofs are such, and should be excepted."

By slaveholders, the Coromantees are esteemed the most intelligent and most capable of being taught; making trusty and good drivers to urge on those of a more sluggish nature; but very impatient and turbulent at being driven themselves. These negroes are of a dingy copper color; their lips and high cheek bones, like the North American Indians. Some of them will lay down and die, rather than yield to be driven to work by the whip. In their native land they are never kept as slaves, on account of their sulkiness.

The next in the scale of value, or perhaps they are equal, are the Congos. They are tall, straight, bright copper-colored, smooth skin, small round hands, and make good imitating mechanics; in that respect, like the Chinese. They are from the south coast of West Africa, between south latitude 4° and 15°; a district of country that contains the kingdoms of Loango, Congo, Angola, Matamba, and Buengula, which was discovered by the Portuguese, in 1481, ever since which they have made slaves and converts of the inhabitants, the greater portion of whom, notwithstanding their contact with the numerous Portuguese settlements in their country, and the strenuous efforts of the missionaries for more than three centuries, still remain sunk in the grossest barbarism and idolatry, going almost naked, living like beasts, and worshiping, if worship it can be called, the sun, moon, stars and hideous beasts and reptiles. Much of the country, back from the coast, is desert and inhabited by elephants, leopards, monkeys, monstrous serpents, and terrible crocodiles.

This country is sometimes called Lower Guinea, and was formerly a great slave mart for Christians engaged in the traffic, and is the coast from which the great trade of the present day is still carried on—*sometimes* by citizens of the United States.

It is from this country that abominable, noisy domestic fowl, known as the Guinea hen, was brought. It is a country so infested with venomous serpents, some of which are more than thirty feet in length, and reptiles, and insects, that it is unfit for the residence of human beings. The negroes from that coast, when brought here and left in a state of slavery, are not found sighing to return to their own native land.

We are sometimes wont to complain of the little ant in this country, while in Guinea they exist in such quantities that they drive the inhabitants from their huts, and have been known to destroy the carcass of an ox in one night, and often would destroy the debilitated sick, if not guarded against.

The Eboes and Mongullas are jet black, medium height, chuckleheaded, thick lips,hearty eaters, inclined to grow fat, seldom possessing any mechanical skill, though generally tractable and patient, lazy slaves, needing to be driven to work, and, unlike the Coromantees, only to be kept at it by driving. They are capable of great endurance under a burning sun.

The Ashantees, who inhabit an interior portion of the north of Africa, have ever been the most powerful and warlike tribe of negroes on that continent. They have frequently defied the scientific and destructive means of European warfare, and during the prevalence of the uncontrolled slave trade, were the principal instruments to supply the hordes of slaves that were shipped from the upper Guinea coast. It was through the agency of this tribe that Spain derived her supplies to fill the celebrated Assiento Contracts she made with Portugal, France and England, to supply their American colonies with negro slaves.

But notwithstanding their power and warlike disposition, many of them suffered the same fate they were so anxious to inflict upon their weaker neighbors—their Christian allies never hesitating to purchase whatever was offered with a black skin, without inquiring whether he was friend or foe.

The Ashantees, Foutis, Sulemas and Dahomans, are similar in leading characteristics as slaves to the Eboes and Mongullas.

There are also some tribes of African negroes that are so low in the scale of civilization, that they are rejected as worthless, even by the West India planter, where they are not even required to learn the art of any thing more scientific than digging up the ground with a hoe, to prepare it for the crop of sugar-cane; for thus thousands of acres are prepared where the use of a plow is unknown.

These beings—I can hardly call them human—in their native country, live in the wild jungles, without fire, without clothing of any kind and without habitations, and upon such food as nature provides for them without labor. They are about four feet high, the head strongly resembling in shape that of the ourang-outang, and having a profusion of hair on the body and limbs.

I was lately told by an intelligent gentleman, that he knew three of them on one plantation in the West Indies, who never could be learned to perform any labor, and their whole employment was catching rats; which they did in their own way; and the strongest incitement to which was the fact that they were allowed the privilege of living most luxuriantly upon all they caught—actually rejecting their regular allowance of good bread and meat for the more palatable dish of roasted rats. So much for taste.

Another instance was related to me by a very kind hearted friend of mine, now residing in Illinois, of an attempt which he made some years ago in Florida, to tame one of these wild negroes, by treating and feeding him with great care and kindness, but before he had fairly accomplished the task, his ward escaped his care and was not seen again for several weeks, when he was found naked as in his native wilds, basking in the broiling sun upon the burning sandy beach, where he had been holding a feast upon the stinking carcass of a porpoise that had drifted up in a storm. So much again for taste.

Can such beings be civilized—christianized—rationalized? Is it sinning against the light of knowledge and truth that illuminates the nineteenth century, to compel such beings to be clothed, and fed, and instructed, and to perform useful labor, in civilized society?

I hope I shall not be accused by any of my abolition friends, many of whom I much esteem—although I must think that their minds are a little morbid upon this subject—as being an advocate of slavery. I am only stating facts and asking questions. Let those answer them who can—I do not intend to try.

I have often been asked whether I believed that all the varieties of the human family, known to exist at this time, sprung from one source. That is another question I do not intend to answer. Let all think for themselves—and whatever conclusion they may come to on this point, it cannot in anywise affect the question as to the comparative intelligence of the white and black races of earth's inhabitants.

> "The same circumstances that are supposed by those who contend for the original identity of the races to have so greatly affected their appearance and physical capacities, could hardly fail to have an equally powerful influence over their mental faculties.
>
> "This, in fact, is substantially admitted by Dr. Pritchard, who has ably contended for their common origin and equality of intellectual faculties.
>
> "He says: 'The tribes in whose prevalent conformation the negro type is discernible in an exaggerated degree, are uniformly in the lowest stage of human society. They are either ferocious savages, or stupid, sensual and indolent. Such are the Papals, Bulloms, and other rude hordes on the coast of Western Guinea, and many tribes near the slave coast and Bight of Benin—countries where the slave trade has been carried on to the greatest extent, and has exercised its usual baneful influence.'"

And he might have added that the same characteristics were to be found among tribes living far in the interior of the continent, who never had felt the effects of that baleful influence.

He also says, that wherever we hear of a negro state, the inhabitants of which have attained any considerable degree of improvement in their social condition, we always find that their physical characters deviate considerably from the strongly marked or exaggerated type of the negro.

This is the very point for which I contend, and the facts here exhibited, go far to prove a gradually ascending scale, from a race but one remove above the ourang-outang, up to the highest grade of Caucasian intellect; and that the distinguishing features of the negro race in a strongly marked degree, are uniformly associated with the lowest state of barbarism; and that, as they advance from this strongly marked type, we find a greater degree of civilization and improvement.

The inevitable conclusion is, that every variety of the negro type, which comprises the inhabitants of almost all central Africa, is indicative of mental inferiority; and that ferocity and stupidity are the characteristics of those tribes in which the peculiar negro features are found most developed.

Now if this is a correct statement, what more could be said to show most conclusively, the radical inferiority of the great bulk of the African people.

But let us not form our opinion on their configuration and appearance alone, but on the fact, that while numberless European and Asiatic nations have attained to a high state of civilization, they continue, with few exceptions, in nearly a primeval barbarism.

It is in vain to contend that this is the result of the unfavorable circumstances under which they have been placed. The history of our own country—yea, the history of almost every town that has been built, and every farm that has been opened in the western wilderness—proves that a people naturally endowed with intelligence and an enterprising spirit, contend against unfavorable circumstance, until they actually create more favorable ones for themselves.

But the Africans have never shown to the world that they possessed any considerable degree of enterprise or invention, or any wish to distinguish themselves in the arts and sciences of peace or war.

From the remotest antiquity to the present day, a portion of their race have been hewers of wood and drawers of water for others, and whether under the name of slave, servant, or hireling, they will so continue, so long as the distinguishing color between the two races shall exist; for, in all this time, they have made so little progress toward the art of being their own masters in a civilized state, that the only legitimate inference is, they are *incapable* of making it—that, as a body, they are incapable of living in a civilized state, only in the condition of servitude to their more highly intellectually-favored fellow men.

And now let us inquire if there is not some natural, physical reason, by which to account for this fact.

Let me inquire of those who read and believe in the Bible, if they cannot find a reason why the descendants of Ham are servants to the descendants of Shem and Japheth, recorded in the 25th, 26th and 27th verses of the ninth chapter of Genesis.

"But if any one should wish to know why the African can expose his naked skin to a tropical sun without suffering pain or inconvenience; why, after a fever leaves him, rejecting soups, teas, and light diet, he eats through choice, and with impunity, a full meal of fat pork and corn bread, and then voluntarily sits in the sun a few hours, as if to promote its digestion, and the next day goes cheerfully to his labor; why he has no revenge for being subjected to the indignity of corporeal chastisement; why he feels a perfect contempt for those persons of the white race, who put themselves on terms of equality and familiarity with him; why he loves those who exercise a firm and discreet authority over him; why he is turbulent, refractory and discontented, under every other government than that which concentrates all the attributes of power in a single individual; and why, when freed from the restraints of arbitrary power, he becomes indolent, vicious and intemperate, and relapses into barbarism—he may find the cause of all these, and many more peculiarities of his character, by closely searching into the anatomy and physiology of his brain, nerves and vital organs. For the knife of the scientific anatomist in his deep research after this cause, has demonstrated that the brain proper, is smaller in them than in other races of men, and that the convolutions seen on the hemisphere of the brain, are less close, less deep and numerous: that the occipital foramen, the medulla oblongata and spinal marrow, and the nerves of organic life are much larger—particularly those connected with digestion and secretion. And all observation proves, that the pleasures of these people are not so much those of reflection, as of sense. The difference in organization is so great, that it has led many wise men to believe that the Ethiopian race was a distinct species of mankind. Others as firmly believe that the anatomical and physiological peculiarities discovered and known to exist in this race of human beings, will be found to be an exact duplicate of that portion of Scripture which foretells the doom of Canaan to servitude.

All history and science go to prove, that the negro is the slave of his appetites and sensual propensities, and must of necessity be so from his anatomical structure. The nerves of the spinal marrow, and the abdominal viscera, being more voluminous than in other races, and the brain being ten per cent. less in volume and weight, he is from necessity, more under the influence of his instincts, appetites, and animality, than other races of men, and has less power of reflective faculties.

The deficiency of intellect is not so great as is the want of a balance between his animality and intellectuality. It is the predominating animality that chains his mind to the worst of slavery—slavery to himself and his appetites—and makes him savage in his habits when left to himself. His mind being thus depressed by the peculiar formation of the nerves of organic life, nothing but arbitrary power can restrain the excesses of his animal nature: *for he has not the power within himself.*

It is undeniably true, that nothing but the compulsory power of a master, has ever made him lead a life of industry, temperance and order: and it is my firm belief, that nothing else has or ever will convert the savage negro into a civilized being.

Withdraw that power, and the present race of peaceful, happy and contented slaves of the United States, would relapse into barbarism. All history shows, that, in a state of freedom from the control of the white man, he is not a free agent to choose the good from the evil; but under the control of that government, which, if God ever ordained one single thing in the Old Testament, he ordained for the good of the Canaanite race; the excesses of his animality are kept in restraint, and he is compelled to lead an industrious, sober life, and certainly a more happy one than he would if he was left to the free indulgences of his indolent, savage nature.

I am not maintaining that it is not, but on the contrary will offer evidence by and bye to show that slavery is, an *evil*, as it exists at present in the U. S., but the evil falls upon Japheth and not upon Ham—the latter is fulfilling a decree of the Bible; while the former is punished for his sins, while carrying out that very decree.

Permit me here to inquire whether the arts of the abolitionists of the present day, are not tending to make more infidels than all the infidel publications of all the Voltaires, Paynes, Wrights and Owens, that have ever been printed. For they are generally professing Christians, whose every act should tend toward convincing all who are not so, that they believe in the words of that book which they profess to believe. Now, I have often heard the argument made use of by those who are opposed to abolition, though not advocates of slavery, that if, as abolitionists are wont to assert, "slavery is a most damning sin," then is the Bible false: for, as they contend, and as I am bound to believe myself, slavery was in Old Testament times, an institution of God's own ordering—that human beings were bought and sold and held in bondage. Even old Abraham had servants, and Joshua made hewers of wood and drawers of water of the conquered tribes of Canaan. And Noah declared, as by inspiration, that the descendants of Ham should be the servants of the descendants of his brothers. Is it for man to say he shall not?

And if it should be denied that the African race are the descendants of Ham, then again will it be said that the truth of the Bible is denied.

The word Canaan is derived from a Hebrew verb, that truly and literally means, *to submit himself, to bend the knee*—which is indicative of his natural qualifications for the duties assigned him, to be a "servant of servants," as it was ordained that he should be, 4,000 years ago. And by a peculiar organization of both body and mind, his condition of servitude is a condition of contentment and happiness, even while enduring a degree of labor under the burning sun of a southern clime, that would annihilate his white brethren.

It is a fact that the negro is provided with an additional anatomical contrivance in the eye, that enables him to endure the rays of a bright sun, without a shade, with impunity.

Is not this an evidence of the goodness of God toward a race whom he has doomed to slavery, so that if they should fall into the hands of cruel masters, who would neglect to provide them with what we consider indispensable, a covering for the head, the light of the sun should not dazzle their eyes, or the intensity of its rays blister their skin. Knowing this fact in regard to the formation of the eye, we shall no longer feel surprised to see the slaves in the sunny south, as I have often seen them, throw off their hats as an irksome incumbrance, and voluntarily expose their naked heads to the burning sun without suffering any inconvenience.

The women often wear a turban, more for ornament than use, which they prefer to a hat that would shade the eye. And I have often seen them traveling in the bright sun on the road to church, with a gay bonnet *carried in the hand.*

Many other instances of the peculiar organization and functions of the Canaanite race, adapting it to the condition of slavery, and guarding it against the evils of the system, or the inattentions of a cruel or careless master, might be adduced; but enough has been shown to prove that their great Master has kindly provided for those whom he has decreed shall be "servants of servants," and "hewers of wood and drawers of water"; so that under all contingencies, as a race of people, they are far more comfortable and happy, and enjoy a condition far more enviable, than that of nine-tenths of the laboring peasantry of Europe. If, in freedom, the descendants of Canaan could do better; live happier; become more religious; and rise higher in the scale of civilization, than under subjection to the whites; would that decree, dooming them to become the "servants of servants," ever have been found in the revelations of the Bible?

And even those who unfortunately are unable to see the hand of God in all things, cannot help observing that the happiness or misery of this people has not been left to the chance of having a good or bad master, but that in his anatomical and physiological structure, his mind and body show a most wonderful *fitness of things*, to enable him to fulfill the destiny that his very name indicates was anciently decreed he should fill: a self-submitting bender of the knee to that race that ever have been, and ever will be, masters over him.

If it had been the will of God, or consistent with great nature's law, that this race should have lived peaceably with the other races of men, when put on an equal footing with them, and had not repaid their kindness with contempt and ingratitude, but had imitated their habits of general sobriety and industry, they would long since have been adopted into the family of nations, and have arisen above the condition assigned them by an unerring law of a power far above that of man.

Let those who implicitly believe in the plain letter and meaning of the revealed word of that being whom they worship, inquire whether both English and American abolitionists are not creating hosts of unbelievers, by falsifying that word by their limited ideas of God's providence, in his wise provisions for, and care over, the descendants of Ham. Let them inquire how it happens, that guards of armed soldiery cannot prevent, in Europe, violence and bloodshed among their "white slaves," while here among the race of Canaan, no force is required to make him quietly and faithfully obey and serve his master, unless it is the will of that Being, that he should fulfill the decree of servitude, by which he is made more useful, more happy, more contented, and more in accordance with the benevolence of God. Let him learn, that it is contrary to the first principles of his nature, for Canaan to league with his masters' enemies.

If you doubt it look at the history of both wars with England; observe the faithful conduct and the firm adherance of the slaves of Virginia, during the revolutionary war, to their masters, when neither the persuasion or force of British armies could sever their allegiance, or induce them to become free.

A British writer, in speaking upon this subject, says, "when the slave owners were in the rebel army, and their families remained in a district of country under our authority, the slaves continued to serve their masters' families as if their masters had been at home and the country at peace. Slaves were often pressed into the service of the British, and those that would not promise to renounce slavery for liberty, were made to work on the fortifications. They obeyed through necessity, until an opportunity offered for them to return to their masters; and but few of them left the country with their benevolent British liberators—and even some who did, afterward found their way back from Nova Scotia, and joyfully returned to the comforts of slavery."

During the revolutionary and late wars, whole districts of country abounding with slaves, were repeatedly left with scarcely an able bodied white man among them, with nothing but an overruling power to guard the lives of women and children; with nothing but the nature of the Canaanite race to hold them in bondage; and yet so far from proving treacherous, or deserting their masters, they continued their labors upon the plantation, and no faithful watchdog was ever more true in giving the alarm of the approach of an enemy, or, if needed, to assist their masters families to escape to a place of safety. And their sagacity in times of danger, was sometimes shown in a most remarkable degree. I happen to know an anecdote illustrative of this point, which was told me by one of the descendants of the family while visiting the premises a few years since, which took place during the war of the revolution.

While the British fleet was lying in the Delaware below Philadelphia, a number of officers and men came on shore one morning at Chester, for a little recreation on land, and a supply of fresh meat and vegetables. They visited the house of General Robinson, who was then absent with the army, and openly offered freedom to the slaves. During the repast which Mrs. Robinson, with a great deal of apparent friendliness had ordered to be provided for the British officers, a slave entered and whispered to his mistress to detain the company as long as possible at the table, while he would take care of the soldiers outside, for Col. Lee's troop were just in sight on the hill. One of the officers suspecting treachery, drew his sword and threatened the negro's life unless he instantly repeated aloud every word he had said to his mistress. Faithful and fearless, he instantly declared that he was telling his mistress "dat dem dam red-coat steal all de chicken and de duck, and one dam red-coat nigger had got old turkey-cock, and dey all swear dat dey kill dis nigger cause him no gib em any more rum." This quieted their alarm and set the whole company into a burst of laughter, which the negro continued to excite, and amid the continued roar of which, that grew so boisterous that they took no note of a bustle outside, Col. Lee burst into the room and declared every one of them prisoners of war.

This faithful slave was subsequently offered his freedom, which he refused to accept, and continued to serve a good master as a slave, long after slavery was abolished in that State.

During the invasion of Baltimore in the war of 1814, whole counties were drained of all the white men except a few quakers, who are always abolitionists I believe, so that tens of thousands of slaves, with none to control and awe, and keep them in check, and prevent them from robbing and murdering the women and children, and deserting to the British and freedom from slavery—yet in this very district, at this very time, did Mrs. Madison take refuge and seek protection while impressed with the fear that the British were anxious to possess themselves of her person.

It was in this district, too, at this time, while masters and overseers were all away, that the negroes on one plantation became a little unruly and neglectful of their daily labor. lazy, indolent, and insolent to their mistress, who undertook to quell a quarrel among themselves, that a man in the neighborhood, who was too much of a cripple to go to Baltimore to serve his country as a soldier, was nevertheless able to quell this difficulty; for, being sent for, he went over unarmed and flogged more than a dozen of the leaders, all able bodied men, and that too within ten miles of several British ships of war lying in the Potomac. The world does not afford the history of any other race who would have submitted to chastisement under such circumstances; nor can it be accounted for, except by those who believe that God foreordained and decreed the race of Canaan to be submissive servants of servants.

It cannot be accounted for, under the supposition that the slaves were ignorant of the promises of freedom which the British held out to them. They were not ignorant of that fact, but being themselves better Christians than their white brethren, they were not disposed to attempt to abrogate the decrees of an overruling Providence. The truth is, that the slaves of the South do not desire to be freed from their servitude. In vain did the British, in the revolutionary war, issue proclamation after proclamation, calling on them to rise in rebellion and go free under the protection of British arms—and in vain did the tories and abolitionists of that day urge it upon them—and in vain, in the last war, did they pursue the same course—and in vain, at this day, is British gold poured out for the same object, aided as she is in her insiduous policy, by the thousands of fanatical allies in this country, who rush blindly to assist her in the only way on earth that she can conquer this Union: and that is by dissolving it through the agency of her tools, the abolitionists. Already have they succeeded in dissolving the union of one of the strongest churches in the country, and seem determined never to rest until they have dissolved the political Union.

But all the efforts of British and American abolitionists will never abolish slavery, unless you compel them to be free against their will. And until they themselves will to be free, I feel as though I was committing a sin to urge it upon them.

Nor am I defending slavery, as that word is often understood in the northern States. Many seem to suppose that slavery means cruelty, tyranny, oppression and every thing that tends to make those in bondage suffer and hopelessly repine. Now if slavery means anything of that nature, then slavery does not exist in any of the States over which I have traveled. The word *slavery* suggests a wrong idea to those unacquainted with the patriarchal form of government exercised over them in the United States. It is precisely the kind of slavery to which every abolitionist in the country dooms his wife and children; and I should feel just as guilty of meddling with that which I had no right to meddle with, while attempting to free them from his control, as I should to free the southern slave from the control of a kind master. Yea, more so, for in doing the latter I should feel as though I were taking a being as helpless as a child, from a state of comparative happiness and reducing him to a state of absolute misery. The few negroes that are needed among the whites in free States, to fill the menial offices of barbers, shoe-blacks, waiters, cooks and scullions, may live comfortably enough—because they are still fulfilling their destiny of being servants of servants. But let them undertake to escape from their destiny, and make the attempt to govern themselves, and you will find them, with scarcely an exception, the most unhappy, discontented wretches in existence—

disturbing the peace of society—filling the prisons—taxing the country for their support—and wherever a community of them are found, becoming one of the greatest nuisances ever inflicted upon a neighborhood.

As witnesses upon this point, I will summon the island of St. Domingo—the city of Cincinnati, with her negro mobs and abolition riots—and the county of Brown, Ohio, in which some very benevolent individuals once made a colony of liberated slaves, and entailed upon the citizens a band of lazy, worthless, starving, thieving vagabonds.

If obedience to the laws of the Bible will confer happiness upon man, and disobedience misery, then can we account for the misery of those of the race of Canaan who refuse to fulfill and obey that Scripture that says he *shall* be a servant of servants to his brother Japheth.

A greater punishment could not be devised or inflicted upon the southern slave at this day, than to give him that liberty which God in his wisdom and mercy deprived him of.

Out of the condition of slavery, there is not a people on earth so unhappy, discontented and worthless, as these Canaanites. Free them from control, and how soon does poverty and wretchedness overtake them. While in a state of slavery, even in the State of Mississippi, which is pointed to as the very hotbed of negro oppression, I boldly and truly assert, that you may travel Europe over—yea, you may visit the boasted freemen of America—aye, you may search the world over, before you find a laboring peasantry who are more happy, more contented, as a class of people, or who are better clothed and fed and better provided for in sickness, infirmity and old age, or who enjoy more of the essential comforts of life, than these *so called*, miserable, oppressed, abused, starved slaves.

Upon this point, before I close, I will also summon a few witnesses. But to continue: all experience proves, that as soon as the negro ceases to act in the capacity of a servant, he ceases to be happy and contented, and falls into a state of vice and wretchedness. All experience proves that he does not seek to escape from that capacity, except in a few isolated cases, where he is influenced by some real or supposed wrong inflicted upon him, or by the persuasion of some meddling abolitionist, whose descriptions of the superior advantages of freedom overcome his weak reason.

In proof of this I will cite the fact, that in the counties of Maryland adjoining the Pennsylvania line, there are 19,000 slaves, who, notwithstanding their proximity to a free State, and constant contact with abolitionists, continue to be submissive to those who were decreed to hold them in bondage. One of these counties, that of Cecil, contained, in 1840, more free negroes than slaves, and probably more anti-slavery white men than slave owners; and yet the slaves here adhere to the service of their masters, with nearly the same fidelity that they do in interior counties of South Carolina.

In the river counties of Kentucky, bordered by Ohio and Indiana, in which are numerous persons ever ready to help the slaves to escape from their masters, there were, in 1800, 8,260 slaves—in 1810, 15,631—in 1840, 29,872. This proves that, instead of escaping and diminishing in numbers, they increased more than three fold in forty years.

Proximity to the free States, facility of egress, together with offered aid in escaping, seem to have had but little effect in inducing any great number of slaves to leave kind masters and comfortable homes, to whom they are as strongly attached as our children are to us and ours.

Well, if they are not inclined to escape, let us see if they are inclined to rebel and take authority into their own hands, when they have the power.

In 1790, Beaufort and Colleton district in South Carolina, contained 7,965 white inhabitants, and 30.798 slaves. In 1840 the same districts contained 11,524 whites and 48,928 slaves. Liberty and Chatham counties, in Georgia, in 1790, contained 3,759 white persons, and 12,226 slaves—in 1840, there were 8,446 whites, and 16,892 slaves. Powhatten, James City, King William, Amelia and Caroline counties in Virginia, contained, in 1790, 20,383 whites and 33,484 slaves—in 1840, 16,706 whites, and 29,193 slaves.

Ten years of the above time was a period of war with a nation that used every art in its power to excite insurrection among the slaves of the Southern States, yet in no part of any of these districts, where the slaves so much outnumber the whites, did any serious outbreak against the authority of their masters ever occur, and notwithstanding that, during periods of the war, it was not uncommon for almost every able bodied man to rush to the scene of danger, leaving their homes without any other protection than the love that binds the slave to his master, and teaches him to protect every thing that master holds dear.

In 1810 the parishes (which are equivalent to counties) of Point Coupee and St. Charles, in Louisiana, contained 2,068 whites, and 5,508 slaves—in 1840, 2,961 whites, and 9,152 slaves.

New Orleans and its precincts, in 1810, contained more than three times as many slaves as whites, and during the war, all Louisiana, and all the river counties of Mississippi, contained far more slaves than whites, and were hemmed in by hostile Indians on all sides, while the British ships were on the coast sending emissaries among the slaves to urge them to rise upon the whites, or escape and seek protection and a free passage and home, under their flag; but, notwithstanding that this was in that country where we are told they are treated with such horrid brutality, it seems that they did not avail themselves of the offered boon.

When Gen. Jackson appealed to the patriotic spirits of that region to aid him in the defense of New Orleans, there were more than 5,000 slaves in and about Natchez, and yet not an hundred able bodied men remained behind to guard their own homes; and the reason was that they knew they had no foes to guard against. But it was a strong manifestation of the instinct that has ever bound the sons of Canaan to prefer a life of slavery, comfort and plenty, and freedom from care, to the precarious existence that attaches to him when free.

Many of the present masters now in that region, were, during this period, rocked in their cradles and nursed by those who had the power in their own hands to have closed their existence, and in one day to have blotted out that terrible sin, which is said to be accursed of God: though it seems he was not disposed to order the slave, as some of his pretended friends would do, to blot it out and wash himself free in the blood of his absent master's wife and children.

Historical facts like these go far to prove, that the doctrine so often preached is not, and cannot be, sustained, that "slavery is sin," that "it is incompatible with republicanism" and "inimical to religion," and that "God looks with displeasure upon all those who," notwithstanding it may be in conformity with Revelation and in fulfillment of prophecy, "hold the Canaanite in slavery."

I have only to say that if God is *displeased*, he has given no evidence of it by continuing the guilty in the enjoyment of a high state of prosperity, notwithstanding their wickedness.

I have heard men contend that the authority given in the Bible for Japheth to hold Ham in subjection, has expired by limitation; but how or when, they could not tell, but believed it was so, because it was inconsistent with their limited ideas of God's goodness and justice to put the descendants of Ham under the despotic power of all kinds of masters—good, bad and indifferent—learned and unlearned—Christians and infidels—humane and cruel—generous and avaricious—to be dealt with according to the whim, caprice, folly, wisdom or madness, of each. Thus has erring human reason, full of vanity, sat in judgment on the decrees of God's wisdom, which is full of justice, benevolence and mercy, and were it possible for the decree to expire, Canaan would be the loser and not the gainer. For the same power that decreed him to a life of servitude, has also planted in his bosom, a principle of protection against wanton abuse and tyrannical oppression, so that though he fall into the hands of cruel or avaricious masters, who would exact more labor from him than is just that he should render, no power can force him for any continued length of time to render it. Far different from the poor starved wretches of England's manufacturing towns, he needs no act of Parliament to protect him from *over work*, for that he surely will do himself.

I doubt whether one single instance can be found among the slaves of the South, where one has injured himself at long and excessive labor. Instead of a cruel and avaricious master being able to extort more than a very reasonable amount of labor from him, his efforts will certainly produce the contrary effect. This is a well known fact, so much so indeed, that an overseer of this character cannot get employment among masters who know that over driving a negro, as well as a mule, is the poorest way to get work out of either of them. These facts are well understood by all observant masters and overseers, that neither mule nor negro can be made to do more than a certain amount of work; and that amount so small in comparison to the amount done by white laborers at the North, that it is a universal observation at the South. Northern men are always the hardest masters, in the vain attempt they make to force the negro to do even half as much as a hireling in New England is compelled to do, or lose his place and wages.

Owing to this innate protecting principle, the tyrant is made to gnaw a file—and the cruel master heaps coals of fire upon his own head; and the avaricious one loses the gold that he vainly attempts to compel his slave to earn by excessive toil.

It is true that some men abuse and harshly treat their slaves. So do some men abuse their wives and children and apprentices and horses and cattle. But I am sorry to say that I am forced to believe the latter class more numerous than the former.

Experience has long since taught masters, that every attempt to force a slave beyond the limit that he fixes himself as a sufficient amount of labor to render his master, instead of extorting more work, only tends to make him unprofitable, unmanageable, a vexation and a curse. If you protract his regular hours of labor, his movements become proportionably slower; and this is not the effect of long habit acquired in slavery, as is proved by the fact that on his first introduction from Africa, he possesses the same principle. Every stranger is always struck, on visiting a slave country, with the characteristic slow movements of this people under all circumstances. Many a hungry traveler, from a non-slaveholding country, has cursed this slow movement while impatiently waiting two tedious hours for a negro cook to prepare a meal, which at last would be found to consist of nothing requiring such a length of time; as the whole interminable, never-changing bill of fare, would consist of coffee, corn-bread and bacon.

Upon a plantation where they are universally well treated, they can, by a promise of rewards, be induced to quicken their speed in a busy time; but under a system of bad treatment and attempted force, they will at such a time slacken their speed and perform their work in a more careless and slovenly manner—fixing generally upon the most busy time, or pressing emergency, to do so. Attempt to force them with the lash when in this mood, and you will fail, for it has no terrors for them—they actually seem to possess a kind of nervous insensibility that shields them from suffering.

This silent though effectual law of his nature, is a far better protection for him than any printed code. Until his condition is assimilated to a comparative state of ease and comfort, the master is a greater sufferer than the slave, for they will break, waste, destroy, idle away time, feign sickness, run away, and do all manner of things to vex and torment him. If he fail to give them enough of wholesome food, he will lose four fold the value, by the petty larceny that they will practice upon him.

Finally, in self defense, the avaricious master is compelled to make the condition of his slaves as comfortable, or nearly so, as others in his own neighborhood, or he must make up his mind to look ruin in the face, or run mad with vexation.

The fact is notorious, that slaves are better treated now than formerly, and that the improvement in their condition is progressing; partly from their masters becoming more temperate and better men, but mainly from the greatest of all moving causes in human actions—self interest. For masters have discovered in the best of all schools—experience—that their true interest is inseparably bound up with the humane treatment, comfort and happiness of their slaves. And many masters have discovered, too, that their slaves are more temperate, more industrious, more kind to one another, more cheerful, more faithful and more obedient, under the ameliorating influences of religion, than under all the driving and whipping of all the tyrannical task-masters that have existed since the day when the children of Israel were driven to the task of making Egyptian brick without straw.

And I do most fearlessly assert and defy contradiction, that in no part of this Union, even in puritan New England, is the Sabbath better kept by master and slave, by employer and hireling, or by all classes, high and low, rich and poor, than in the State of Mississippi, where I have often been told that that thing, so *accursed of God*, existed in all its most disgusting deformity, wretchedness and sinful horror. From the small plantations, the slaves go more regularly, and better dressed and behaved, to church, often a distance of five or six miles, than any other class of laborers that I have ever been acquainted with. Upon many of the large plantations, divine service is performed more regularly and to larger and more orderly audiences, than in some county towns.

Upon one plantation that I visited in Mississippi, I found a most beautiful little Gothic church, and a clergyman furnished with a house, provisions and servants, and a salary of $1,500 a year, to preach to master and slaves. Upon another, situated upon the bank of the lovely lake Concordia, where the slaves outnumber the whites twenty to one, upon which I spent some pleasant days, I took upon myself to inquire particularly of the overseer, not himself a religious man, and at first opposed to religious instruction for slaves, what had been the effect of the earnest and fatherly admonitions and worship of the owner with his slaves every Sabbath day, and was assured that it had a most beneficial effect.

If any man can witness some of these happy meetings of slaveholders and slaves that I have, and not feel his heart more softened toward the influences of religion than he would in listening to the harangue of some mistaken fanatic, who would sever the bonds so closely knit between such a patriarch and his children, even if that bond should be severed in blood, I have only to say that his heart is not affected by the same influences that mine is.

Upon another plantation I visited, the master is a most decided infidel; yet so convinced is he of the advantage of giving religious instruction to slaves, that he has taken upon himself to teach them what he is so unfortunate that he cannot believe himself. Of course, from them he hides his own unbelief.

And the manner that some of this infidel master's slaves, walk in the path of Christian duty, might well be followed by those I know most loud in denunciation of all men who dare to hold their fellow-men in subjection.

And these few cases mentioned, are by no means isolated ones. I believe that it is susceptible of proof, that there are more Christian communicants, counting black and white, in the slave-holding States, than in any other portion of Protestant Christendom, containing the same number of souls. But I am sorry to say, that there are such numbers of professing Christians in the free States who deny that man can own a slave and still be a Christian.

And I am still more sorry to say, that the action of English arrogance and ignorance, which, under the name of abolition of slavery, seeks to throw a fire-brand into the explosive magazine of southern excitability, for the hidden purpose of blowing up the Union, aided as it is in this country by political demagoguism, ignorant fanatacism, and honest belief that slavery is the accursed thing of God, has done more to retard the progress of Christianity, civilization, comfort and happiness, among the slaves, than all other causes put together.

Do we not forget the command, "judge not lest ye be judged," when we sit in judgment upon the slaveholder and denounce him as destitute of all the attributes of the Christian religion, and refuse to associate and commune with him as a brother, because he happened to be born in a southern clime to the inheritance of slavery.

And here let me inquire, *what is slavery*—as you understand it? Is it to be better fed, better clothed, better housed, better lodged, better provided and cared for in infancy, sickness and old age, better loved and respected by master, mistress, children and fellow laborers, better instructed in the principles of morality and religion, and, finally, at the close of a long life of light labor, comfort and happiness, to be better and more decently buried, than are millions of the laboring population of FREEMEN in Europe, and thousands of the same class in this boasted land of liberty? For this is most truly the condition of slaves in the South.

And if you answer, still he is a slave—I answer, true, he is a slave. And what is a freeman? Stand forth, first, ye who shout "long live queen Victoria;" while I display the enviable condition of Britania's *free born* citizens. Come forth from your damp and crowded cellars and fireless dens of squalid wretchedness, and exhibit your starved and emaciated forms, your sickly countenances, your toil-worn, youthful, crooked spines, your swelled joints and contorted limbs, clothed in so scanty a supply of filthy rags that they are hardly sufficient to harbor the vermin, or hide the nakedness, of proud anti-slavery England's freemen! Come forth from your dark and dismal coal-mine caverns, a thousand feet below the surface of the earth, where you live upon a scanty pittance that barely supports life, while you are able to toil, but now you are past it: come forth, then, and enjoy, in your toil-worn premature old age, the comforts provided for you in freedom's work-house.

Stand up ye full fed, hard toiling laborers upon the soil ye do not, and cannot own, for I would see how even the best classes of England's free born agricultural laborers, who produce all that lords and bishops eat, do eat themselves! Seven pounds of coarse black bread and four ounces of meat per week. Ah! that is freemen's food, is it? Now take me to your lodging room—for I would see where you rest your weary limbs after partaking of such sumptuous fare.

It is here—men, women and children, like hogs huddled together. But ye are freemen, and dare not murmur at your lot, or neglect your labor, for thus you will be driven forth from the enjoyment of this freemen's fare, and be free to starve, or steal, to prolong your miserable life upon the food provided for convicts and refused to you while honest.

We hear the sound of the factory bell, that tells the English operative of that world of machinery, of that government who fain would supply mankind with all their manufactured articles, that he is now free, at nine at night, to retire to his supper and his bed. We see them come—infants, youths, adults, men and women, but never old age: that dwells not here. But why are those children carried upon parents' backs—are they sick? No! Then where is the energy of youth that should prompt them to run and skip and shout and play, when escaping from a day of confinement? They have been worked, beat, duck'd and starved, and compelled, like machines, to stand up to their toil, till at the first sound of the releasing bell, they sink to the floor, unable to put forth another effort, and would rather there die than undertake at this hour to walk to their miserable homes. Is it to be wondered that old age, hale and hearty, is not here—when we see such waxen visages, and incubus-like languor, sitting upon the youth and prostrating their vital energies.

But let us follow the haggard-looking, miserably clad, hard-working operatives of the English factory system, to their homes, their supper, and their bed—down through this filthy lane, down into that dismal cellar, see them go—sixty men women and children in a room not large enough for six, nor fit for the abode of any human being. And there is the supper sumptuously set forth; but there is no table—no chair—no plate—no knife—no fork—no spoon. And why should there be, for there is nothing but a small piece of coarse black bread and a cup of raw Bohea tea for each—and the breakfast will be the same—and the dinner, potatoes fried in lard and perhaps a few small bits of meat; and the lodging, a litter of straw, made filthy by long use—for there straw costs money—in which all huddle together, lying close to keep each other warm, and from which all must rise at early dawn, to resume the daily toil—under a more severe task-master than the southern slave's overseer.

But to the proof. An extract from the sworn testimony of a factory overseer, before a committee of Parliament in 1832.

> "I was obliged to chastise them (the factory children) when they were almost fainting, and it hurt my feelings: then they would spring up and work pretty well for another hour—but the last two or three hours was my hardest work, for they then got so exhausted."

Sir Robert Peel, in speaking of the factory that he owned, deposes as follows:

> "I was struck, whenever I visited the factories, with the uniform appearance of bad health, and, in many cases, the stinted growth of the children."

Witnesses also prove that the mind and morals suffer equally with the body. That death, a lingering miserable death, which some of the eminent medical witnesses do not hesitate to call "*murder*" and "*infanticide*," is the effect of working children in a close room of confined atmosphere, sixteen hours a day. That such unremitting toil, and meagre diet, deforms the body, impairs the health, breaks the constitution, and swells the bills of mortality, among the *freemen* of slave-denouncing old England. Shall I be told that this is free labor—that the master in England has no power to compel these slaves of the factory system (or "*operatives*," I must call them, since *slave* sounds offensive to freeman's ears) to overwork themselves—that they can quit their employer whenever they please, etc.? Alas the law of necessity is upon them—endure or die!

Now, lest this language sound too strong, allow me to present language from high quarters. It is extracts from English papers, prefaced by one of our own country. Here it is:

> "SUFFERING IN ENGLAND.—It is next to impossible for the people of this country to form any opinion of the suffering condition of the immense masses of the hopeless poor in England. We learn, from an English paper, that a public meeting of the inhabitants of Leeds was held a few weeks before the sailing of the last steamer, to investigate the condition of the unemployed poor—and a

report, carefully drawn up from detailed accounts, was read to the meeting. The extent of destitution, as represented in this report, is indeed frightful. It appears that there are twenty thousand individuals in Leeds who are living on 11½ pence a week each—about twenty cents! The report said:

"'The most harrowing descriptions were given by some of the visitors of the scenes they had witnessed. "The cases of distress," says Dr. Smiles (editor of the Leeds Times), "of extreme distress that had come under his notice that morning, had harrowed up his very soul. [Hear, hear.] There was one case which he would particularly mention. He had noted down the name, and he was sure, if any doubts existed, individuals might satisfy themselves as to the correctness of the statements. At the end of Brooke street there was a small cellar dwelling, nine feet by twelve, into which they were introduced by the enumerator. The dwelling was so considerably beneath the street, that only half of the window was above it. It was a damp, disagreeable, ill-lighted, ill-aired, den. [Hear, hear.] In that apartment they found three families, consisting of sixteen individuals, nine who slept in it every night. [Sensation.] There were four adults, and twelve children. Six individuals, constituting one family, slept upon a litter of straw, huddled together, not like human beings, not even like animals, for their situation was nothing to be compared to the comfort of our dogs and our horses in our stables. [Hear, hear.] Other four or five slept on a bed of shavings, and the remaining five slept on another miserable bed in the apartment. When they entered, the poor mother was weeping, her infant was on her knee in the last stage of a fatal disease, dying without any medical assistance. [Sensation.] The family were entirely destitute, no means of subsistance, no weekly earnings, no parish relief. [Hear, hear.] That was one instance." We fear Leeds may stand for a sample of nearly every town in the manufacturing districts. Winter is rapidly advancing on a population without employment, and without property, what they had having been parted with in order to supply their most pressing wants. It was stated, too, by Dr. Smiles, that "the small grocers were failing and becoming bankrupts in large numbers. Many were not able to pay their debts. This, again, acted on middle class men in a higher condition of life; and he could state, what most of them, perhaps, knew, that a large number of the first class tradesmen have recently become bankrupts."'

"Another paper, the Liverpool Mercury of the 30th ult., says:

"'The winter is not yet commenced, yet the general distress throughout the country has arrived at such a point, that nothing but a wholesale famine can carry it further. From Paisley, the accounts are frightful—so frightful that even Sir Robert Peel, although he still adheres to his non-intervention as a Minister, declares his readiness to forward a private subscription for its amelioration as an individual. In the Potteries, famine stalks abroad; thousands are starving; and those who would cruelly attempt to delude the sufferers into the belief that machinery is the cause of their distress, may read, in the general destitution there, the refutation of their foolish falsehood. In the Potteries there is no other machine worked but the potter's wheel mentioned in Scripture. In the metropolis, we have a specimen of the general destitution, in the fact, that even printers, usually the most prosperous of the classes who live by labor, are appealing to private benevolence, with the appalling fact, that twelve hundred compositors and pressmen are unemployed, and many of them, with large families, are actually in a starving state.'

"The following is an extract from a letter giving an account of the distress among the working classes, prevailing at Stockport:

"'All the other trades are equally suffering. Such is the extreme starvation point to which they are reduced, that their wives are to be seen begging from door to door, or gathering the disgusting offals that are to be met with in the streets. Meat and water are a luxury which few can boast of, and as for fire, whole houses are without a spark. Last week, upward of two hundred fresh men turned out for wages, and there is every reason to fear that, ere long, that number will be frightfully increased. The constant cry of the men is, "Are we to die of starvation, or see our children fall before our faces, from hunger, while plenty abounds in the land?" The situation of the females beggars all description—naked, shivering with cold, and faint from hunger, they are parading the streets and imploring, with tears and supplications, assistance for themselves and their famishing children.'"

From another paper I give further extracts illustrative of the subject under examination.

"Let us look, for a moment, at the condition of the '**Free**' laboring population of Great Britain. We give statistical facts:

"'In London, one-tenth of the population are paupers, and 20,000 persons rise every morning without knowing where they are to sleep at night. The paupers, criminals, and vagrants, alone, are 1,800,000.'—*Alison's Principles of Population.*

"'In Liverpool, there are 7,800 inhabited cellars, occupied by 39,000 persons. The great proportion of these cellars are dark, damp, confined, ill-ventilated, and dirty.'—*Mr. Slaney's Report to the House of Commons.*

"Dr. Robertson, an eminent surgeon of Manchester, who has had a great deal of experience among the laboring classes, sums up thus the accumulated evils incident to their condition:

"'Too early employment—too long employment—too much fatigue—no time for relaxation—no time for mental improvement—no time for the care of health—exhaustion—intemperance—indifferent food—sickness—premature decay—a large mortality.'

"The same gentleman, in speaking of the laboring poor of the agricultural districts, says that, in his opinion, their state is not more favorable to the preservation of perfect life of body than that of the manufacturing poor. He remarks:

"'What I say concerning these poor people, is the result of much observation of them, and I consider it a duty to lift the vail from a subject surrounded by many respectable prejudices. * * * * * Their extreme poverty, and their constant labor so influence them, that the majority—I am sure I speak within bounds—have never the enjoyment of health after forty years of age. This is the result of bad food—insufficient clothing—wearing toil—and the absence of all hope of any better in this world.'

"'The peasant's house is not the abode of joy or even comfort. No "children run to lisp their sire's return," or "climb his knees, the envied kiss to share." The children are felt to be a burthen, ill-fed, ill-clothed, and lying on beds worse than the lower animals; they are ragged, or clothed by charity; untaught, or taught by charity; if sick, cured by charity; if not starved, fed by proud charity,' &c.

"Dr. Kay, in his description of the Factory System, says, in speaking of the condition of the artizan:

"'Domestic economy is neglected—domestic comforts are unknown. A meal of the coarsest food is prepared with heedless haste, and devoured with equal precipitation. Home has no other relation to him than that of shelter—few pleasures are there—it chiefly presents to him a scene of physical exhaustion, from which he is glad to escape. His house is ill-furnished, uncleanly, often ill-ventilated, perhaps damp; his food, from want of forethought and domestic economy, is meagre and innutricious; he is debilitated and hypochondriacal, and falls the victim of dissipation.'"

ART. III.—THE COMMERCIAL AGE.

SPIRIT OF ANCIENT AND MODERN PHILOSOPHY; DOCTRINE OF PRACTICAL RESULTS; DIFFUSION OF KNOWLEDGE; THE PRACTICAL SCIENCES; RELATIVE EDUCATIONAL ADVANTAGES NORTH AND SOUTH; IN NEW ORLEANS; UNIVERSITY OF LOUISIANA AND THE COMMERCIAL PROFESSORSHIP; OUTLINES OF THE HISTORY OF POLITICAL ECONOMY, COMMERCE AND STATISTICS.

[The following was the opening lecture before the *Chair of Political Economy, Commerce and Statistics* of the University of Louisiana, at New Orleans, 1849, the first chair of the kind in our country. It is published in order, as far as possible, to stimulate *commercial education* among our youth. All over the country we now find chairs of practical sciences, etc., being introduced into colleges, etc. Since the period of our first suggestions in regard to a commercial professorship, in 1846, we have been gratified to see the increasing interest which the subject begins to attract. The South, too, is becoming every year more and more independent in regard to education, and is building up everywhere her own institutions. An unfavorable view is taken in the lecture of the *seductions* of New Orleans. This would not retard the advancement of a University. Experience has shown, that a great city presents greatly more advantage than evil in matters of education. We often find as much immorality, too, in a country village. What is said about the *defective education of planters' sons*, applies more to the old southern States. In some of the south-western States it does not apply at all. We submit, however, that practical instruction is always too rare. If it be objected that *Commerce*. in the lecture, is made more prominent than *Agriculture,* which is its noble parent, the reader will find, by turning over the back pages of the Review, this is not our mind. In the 4th volume, page 436, we have published a lecture upon *Agriculture and Agricultural Classes* before the State Society and became more enthusiastic than is our wont. The Chair will not neglect agriculture as its published circulars and advertisements will show.

It should be observed that many passages and paragraphs in the lecture are, in the identical language of the lecturer, used in other writings. In the haste with which the lecture was written, it was impossible to avoid this or find better expressions. To the reader, however, they will all be alike new.—Ed.]

In the contrast of the past and the present century with every other that has preceded, in the history of man, there can be discerned nothing more remarkable than the different direction which has been given to the operations of mind, and the difference in the nature and extent of the knowledge distributed throughout the masses of society.

The ancients were curious in the speculations which they indulged, and, in regard to the sublime doctrines of Ethics and Theology, their philosophers reached a very high elevation. In Metaphysics and Logic, in Rhetoric and Poetry, they have not been surpassed, perhaps, in the most elevated achievements of modern times. Upon these studies and exercises, the whole force of the human intellect was employed; and within their narrow circle was embraced all that was held attainable, or even desirable.

However limited the field of knowledge, its distribution throughout the masses of society was incomparably more so. Philosophers make the worst of all teachers. To descend from their stilts, and encounter the rude contact of ordinary pedestrians, were suicidal to their dignity and importance. They did not attempt this. They had academies and lyceums, to be sure; but in these they were certain to be attended only by those from the higher and wealthier walks of society. The light which went out from them was but a fickle flame, illuminating feebly the heights, and leaving the plane surfaces of society in primitive obscurity.

The few favored ones who were admitted to the Academy, the Lyceum, or the Porch, were initiated, as it were, into the mysteries of science, which they were taught would be degraded by the least popular contact. Hence, the *esoteric* and *exoteric* doctrines—the one etherialized and purified, to be received and held by the neophytes—the other gross enough, and sensual enough for the multitude. Thus, with the multiplication of great men, dwarfed less and less the smaller ones. Could more have been expected of mere philosophers? Well has Bacon said of them—"Like the stars, they are high; but, like the stars, they give little light, because of their so great elevation."

But this era passed, and there came another, when such learning as had accumulated in the world sought refuge from barbarous invasion in the cloisters of monks and monasteries. The great men of the earth would have none of your monkish letters and erudition, and arms and violence were the sure and sole passports to distinction.

The *people*—the people, about whom demagogues in all ages have prated so much—were afar off, little regarding or understanding these matters. The philosophers and scholars monopolized to themselves all the results of their investigations by sealing them up in vast folios, made up in the dead languages. It was not even yet perceived that such sublime conceptions and reasonings could be discoursed of, and elaborated, in the common parlance of the vulgar tongues.

But "the stone which the builders rejected" was destined still as the "head of the corner." Man was working out, insensibly, but step by step, his own regeneration. He found the compass—he found the printing press: he found—but who shall enumerate his rapid and brilliant discoveries? A trumpet voice, from hill and vale, preached deliverance. The sublimities of philosophy, which sought no connections with earth, were to be leveled, and the wants and circumstances of man to become, henceforward, the true rules for determining his investigations. The *nature* and *essences* of matter and spirit sunk in importance, and into insignificance, in comparison with the *laws* of this matter and spirit. In the subtile mazes of scholastic teachings, these laws, like essences and substances, were not to be derived. The chemist's crucible and retort became necessary—Nature, as she is, must be explored and analyzed—facts collected and arranged—inferences drawn, and principles fixed. *Theory* and *fact* are the poles of ancient and modern philosophy. Bacon has risen up against Aristotle, and vindicated *fact* in the face of all nations and men. The Baconian, or inductive, method of philosophy is born, which, disregarding all subtilties and crudities—all theories and conjectures—seeks alone in the wide world for facts, and receives nothing else for science and knowledge. It was humiliating to the philosophers, that they must become as little children, interrogating Nature in regard to the simplest truths! How much more complimentary to human reason to arrive at truth by withdrawing altogether from the gross material world, and finding it in the subtile operations of mind. But when this first lesson was learned, the morning stars might have sung for joy; for the world had entered upon its millenium. The lines and boundaries of science were distinctly marked; the path of exploration pointed out so simple that the wayfaring man might follow it. The world, itself, from this moment, began to be one great school-house—taught no longer by robed philosophers and cloistered monks, but by every atom distributed from the all-bounteous hand of Nature.

It is a remark of Bulwer, in relation to our own times, that the masses of society, in every age, are as well informed as the teachers and philosophers of the preceding. Though the observation be not true, in the broadest sense, it is sufficiently so to induce gratulation that the seeds of progress have been so abundantly sown. It is a proud satisfaction that humanity asserts its dignity, and that science and philosophy are no longer set aside, and reserved as the peculiar inheritance of particular orders, or classes, or nations of men. To the hovel of the peasant, and the palace of the magnate, light travels on its way, alike uninterrupted and free, illuminating and cheering with its rays; and, from the depths of poverty and want, the native genius may emerge, to share glory with the princes, and rulers, and teachers of the world. The printer's glorious art levels all distinctions; and the penny sheet, as well as the gilded folio, will chronicle the affairs of nations, and the advances of science. A farthing becomes as potent as a fortune.

Now is it we perceive that obsolete and impracticable learning, over which whole lifetimes have been spent—in whose ponderous tomes the little mustard seed is hopelessly and irretrievably lost, for all practical purposes—is not the only object of regard. The acts and pursuits of life—the highest as the humblest—may be illustrated and enforced by the teachings of genius, and the explorations of learning. Scholars are invoked from their closets into the busy, active world, where, if they lose any thing in the rude contact, they gain more, in learning that, to influence the age, it is more necessary to keep up with than attempt to go beyond it. The achievement of to-day creates the want of to-morrow, and thus is the progression endless.

The Colleges and Universities of the world have united, at last, in this movement of the people. The waves have been beating up against the antique. Metaphysics, Philology, and Dialectics, though yet high, and justly high, in rank, are jostled in their stately and measured tread by Civil Engineering, by the Philosophy of Manufactures, the Chemistry of Agriculture the Principles and Laws of Commerce, the mysterious and inexhaustible powers of the Steam Engine. Venerable Oxford, and Harvard, and Yale, throw away their stiff Latin and Greek formulas, in which student and professor might once only hold courteous discourse.

And, indeed, my fellow citizens, if *men*, rather than "walls, and fortifications, and towers," constitute the state, it is not mere aggregate masses, without reason, discipline, intellect. We must rise far higher. Nature bequeaths the elements, but they must be fashioned into a shape, which, in her highest munificence, she does not give. Victorious in arms, on the battle-field—shedding abroad over all countries and men her political influences—the terror of despots and tyrants—our country's mission is but partially achieved. Beyond this, and above this, she must "snatch a grace." Thank God, in her apotheosis, *intellect* shall be elevated with *liberty*—*science* with *human rights*—*genius, learning, arts*, with *political equality*. No longer it may be the only great Republic—let it be for our country to claim the noble precedence of them all.

In this favored land, blessed by so many of the bounties of God, can any region be content with actual, or alleged *inferiority?* Can the South, which has ever contributed such glorious spirits to the national councils, and in the field? Can the West, whose teeming millions, striding onward in wealth and in power, leveling great wildernesses, and sweeping from mountains to mountains, innumerable? We honor New England's temples of learning, and monuments of genius—her scholars, poets, philosophers, authors and inventors—her arts and science associations—but in this our admiration, let us not be unjust. Shall we of the South be the mere "outside barbarians," lighting up feeble torches at their fanes? No! no! We submit not to such humiliation. The Athens of America—the Corinth—the "very eye of Greece," can only be placed in the chilled regions of the North by reversing its ancient position. *The civilization of the world has come from the South, as all history shows.* Let our young and rising generation seek the light, as it is reflected from their own hill tops, and through their own valleys. Let not a tyrant necessity subject them to periodical banishment from home, and its associations, at the tenderest period, to form among a distant people, habits, feelings, and thoughts at variance, frequently, and frequently *opposed,* to those they have left behind. Is it thus that we would rear up men to battle for the rights and institutions which belong to them, and which have come down to them from their fathers as an inheritance?

The people of Louisiana, almost a new, but a high minded, liberal, and progressive people, have, in primary convention, established among their fundamental laws, one for the organization of a HOME UNIVERSITY in the heart of this great city, to distribute, in all times, to the countless thousands who shall seek domicil here, the blessings of science and knowledge. The MEDICAL department has already been in operation many years, and, under the ablest supervision, attracted students from every section of the valley. The LAW department, under charge of some of the first jurists, exhibits the most flattering prospects. In the department of SCIENCE AND LETTERS, efforts will be made to secure the same high results, at the earliest day, and the success of this branch will very much depend upon the sympathies and coöperation of our wealthy and enterprising citizens, who, from their abundance, can spare the means to provide for the permanent advancement of New Orleans. Already have been found a White, a Burke, and a Touro. Of the ACADEMICAL department we might remark similarly.

Thousands of youth are attracted annually to our city from every quarter of this great Republic. They seek fields of enterprise and usefulness. The spells and fascinations of a gay metropolis are thrown around them, and every thing administers to the indulgence of passion. The restraints which society in general imposes, are not recognized here, for its doors are closed. The sources of intellectual enjoyment and improvement are meagre in the extreme, in New Orleans. We have scarcely a public library; certainly not one in the broadest sense *public.* Our public lectures are few and far between; and they have been the offspring of the liberal spirit of a few citizens. May not the advent of a better day be hailed in the progress of the Institution we are commemorating? Will not our city afford new, and higher attractions? Shall not men of science and letters be allured hither, and anxious students, from all the West, and South, and the neighboring regions of Mexico and the West Indies? Though many despond, let us, at least, hope. The glorious consummation may yet await us.

There is one feature in this University which is *sui generis,* and deserving of all praise: antique, obsolete, impracticable learning—if I may so express myself—is to have no place. The plan which has been adopted is upon the most liberal system of *progress.* Like the *Smithsonian Institute,* at Washington, its object is to diffuse knowledge among *men,* and not among *philosophers!* It throws away the stilts—it removes its head from the stars—it comes down by the side of man, as he is, interrogating his wants, and seeks to make him better, and nobler, and more fitted for the relations in which he stands toward society. In one word, it is an Institution *for the people*, where all may come and drink of the fountains of knowledge, and, as we hope in the result to add, "*without money and without price.*"

One of our citizens, whose history extends back further than the American history of New Orleans; who, in the prosecution of extended trade, has amassed wealth and opulence; but whose ready hand has ever been open, and whose enlarged heart embraced every scheme of public welfare and advancement, has come forward, in the most liberal spirit, to aid in the establishment of this Institution. I think I cannot be accused of undue panegyric, when I say, the act is one of noblest character, and is deserving of commendation and imitation, in all times; and I am sure that our excellent citizen will meet with that reward in the approvings of his own heart, which is beyond all praise or approval of the world.

The idea which was uppermost in the mind of Maunsel White, in contributing his support to the University, was that the active, practical community should be represented in it, and receive, in an especial degree, the marks of its fostering attention. The idea was worthy of the profession in which he had been educated. He might have asked, and indeed did ask, why it was, in regarding the various Universities and Colleges of our own and of other countries, that no provision had ever been thought of, or at least adequately carried out, in favor of the MERCANTILE CLASSES?—Was there nothing in the nature and character of their pursuits, worthy of illustration by science and letters, and capable of being advanced by the deductions of philosophy, and the results of enlightened experience? Is the merchant *born*, or is he *made* by the slow and patient operations of thought, recognizing the most liberal, enlarged and enlightened views? The mere trader and peddler are *born*, and natural cunning and cupidity may urge them into opulence, without the intervention of any teachings, or a single liberal sentiment! It was this peddler enterprise which made the proud Earl Warwick say, "I like not, man, the trader spirit, the spirit that cringes and higgles and splits straws for *pence*, and roasts eggs by other men's blazing rafters." The craven spirit of such men is well rebuked by Burke, who claims their ledgers as their Bibles, their *iron chests* as their altars, and their *money* as their GOD! The true merchant scorns the association of such men. He looks for his bright exemplars, to the Roscoes and Medicis of the world, and cherishes that high purpose, that noble resolve, those liberal and enlightened sentiments, which make the merchant in the most unlimited sense the man, the citizen, the patriot, the public benefactor.

> "Undimm'd the *man* should thro' the trader shine,
> And show the soul unlabel'd by his craft."

In the circumstances of the whole SOUTH, too, was there much to attract attention in regard to the condition of its merchant interests. Why, throughout all these States, has the whole field of our commerce been left open to be occupied *exclusively* by the constant stream of adventurers, who flock among us, and, with many noble and distinguished exceptions, of which our city affords the happiest instances, are ready, like birds of passage, to be off again, to expend the result of their few years' thrift in beautifying and adorning every other section of the Union than our own? The reason is but too plain—our citizens have been content with the once rich but now decaying results of *agriculture*, and from ignorance of the true nature and dignity of COMMERCE and the elevating influences it is calculated to exert, have rather shunned a participation in it. The sons of the planters have preferred to stock the learned professions beyond the possibility of demand, or to indulge in idleness, vice and dissipation. These baleful errors have been sapping our prosperity, and no where more than at the South is it necessary to rescue commerce and place it upon that proud pedestal which, in the world's affairs, it is yet destined to occupy.

In New Orleans, too, a city more strictly *commercial*, perhaps, than any other upon the face of the earth: which has sprung up as it were among the marshes of the Mississippi, an infant Hercules—feeding, growing, and enlarging upon TRADE, and incapable of a single breath without the workings of its great arteries—stretching out its broad arms and drawing in the wealth, resources and power of an empire—challenging in its march to greatness and threatening to outstrip every other commercial mart upon the continent;—in New Orleans was the position of the merchant classes deserving of highest consideration.

It is but a few years ago that a Convention of the Southern States, held in Augusta, Georgia, to consider the low state of our commercial interests declared:

> "That this Convention cannot too earnestly recommend the speedy adoption, by all their fellow citizens, of measures to introduce *commercial education*; to train up their youth to habits of business, and thus to establish a body of merchants whose every interest and feeling shall be centered in the country which reared and sustained them."

The founder of the professorship of Political Economy, Commerce, and Statistics in the University, did me the honor, many months ago, to interchange views with me in regard to his reflections and designs, and to request a plan to be drafted which might in some degree meet them, and be capable of being put into immediate operation. With an humble desire to coöperate in every way, in extending the great interests whose advocacy I had adopted at a very early period of life, I complied with the request, in the best manner I was capable. It pleased the Board to adopt the plan—organize the chair, and by a flattering unanimity invite me to its occupation. Grateful for the honor, but anxious for the service, with a will and an enthusiasm which cannot but make amends for most deficiencies, I did not deliberate in my course, and without one hope of pecuniary recompense adequate in the slightest degree to the toils and labors assumed, I appear before you, fellow citizens, this evening, in the introduction to a course of investigations which I dedicate to your service.

Without attempting to mark out in its details the path which will be pursued by future and abler occupants of this Chair, long, long after my own connection with it has ceased, or even to declare in advance the direction I will myself take, I will yet say this in all honesty and truthfulness, that it was never the intention of our founder, nor would it at all comport with my own feelings, to mingle in any manner with the teachings of the chair, the questions of party and its politics which divide and distract the country. Higher, infinitely higher, is the chair of the University placed, and in its investigations, truth alone, eternal and immutable truth, is the polar star, whether twinkling in the crest of friend or foeman—truth which knows no favors, admits no partizanship, pertains to no country, time or men, independent of the support of the great and powerful, most beautiful when, trodden under foot, it glitters amid dust and rubbish—above the clouds of passion or of prejudice. For certainly, says Bacon, it is heaven upon earth to have the mind turn upon the poles of truth.

"Truth ever lovely since the world began,
The foe of tyrants and the friend of man."

Standing upon the porch of the temple into which we are about to enter, it will be as well for us to sketch the outlines of its interior structure, leaving the individual features to be traced and studied hereafter.

POLITICAL ECONOMY is its great basement—what is political economy? It has been fashionable with those whose strongest argument is ever a sneer, to decry political economy as an abstract, unintelligible, impracticable science, adapted only to the closet. Now, without confusing ourselves with terms and definitions, let us ask, at the outset, if any study which proposes to improve the physical condition of mankind and add to their comforts, does not at once arise to the highest dignity and challenge respect at least if not investigation. In one word, this may be said to be the whole foundation of political economy, and if it has effected any thing in this field for the amelioration of man, and the advancement of nations, it would be most unjust and illiberal to charge upon it that it has not done every thing, and that it has not reached certainty upon all points, or enfranchised itself altogether from theory and conjecture. It will not surely be denied, that the field of research proposed is sufficiently large and important to argue some fruits, and if error and doubt have been often commingled in the results, it would be as well to throw overboard all theology, moral science, and medicine, on this account, as political economy.

Political economy, says Dr. Lieber, refers only to the general causes affecting the productive faculties and means of a nation; meaning by productive faculties and means, the capacities and resources for producing things that have an exchangeable value. Thus the constitution of government, the laws, the judicial, social and economical institutions, the schools, the religion, the morals, soil, geographical positions, climate, arts, indeed all the circumstances in the character and condition of a people so far as they have an effect upon the public wealth, i. e., the production, distribution, and consumption of commodities, are subjects of this science. It is, accordingly, a science of lofty and liberal character, not identified with that of politics, but very nearly allied to it, and indeed one of its branches; for a man would be but ill qualified to legislate for a State, who would be ignorant of the general laws affecting its productive capacity.

It is without doubt true, we are indebted to the Italians for the first efforts to collect and combine the principles of political economy, and the names of Gassendi, Sismondi, etc., are among the fathers of the science. Their labors, however, and those of the French, long afterward, were mostly detached essays upon the leading branches of trade, etc.

Near the close of the last century, the great idea of the *Wealth of Nations* was elaborated in the profound mind of Adam Smith. For the first time, political economy was systematized and treated as a whole, and taught, as was said of Blackstone's lectures, to speak in the language of the gentleman. This profound philosopher brought light and consistency out of chaos and though in regard to many important particulars he may have been led into error, yet upon the whole the value of his researches and deductions can never be too highly appreciated, or the substratum upon which he has rested them ever removed. As from a great torch, all subsequent lamps have been lit.

The doctrine of the economists or the *agricultural system* of Quesnai, is now regarded entirely exploded. *Wages, rent,* the *poor laws,* *sources of value, division of labor,* etc., are still open questions; so also the *definitions of wealth,* and productive labor, the *nature and measures of value,* the nature and extent of the *principles of demand and supply,* the origin and progress of *rent,* the causes which determine the *wages of labor* and the *profits of stock,* the causes which practically retard and limit the *progress of wealth,* the level of the *precious metals* in different countries, the principles of *taxation,* &c. Mr. Malthus confesses there "are in political economy great general principles to which exceptions are of the most rare occurrence, and prominent landmarks which may almost be depended upon as safe guides; but even these, when examined, will be found to resemble in most particulars, the great general rules in morals and politics, founded upon the known passions and prejudices of human nature; and whether we advert to the qualities of man or of the earth he is destined to cultivate, we shall be compelled to acknowledge that the science of political economy bears a much nearer resemblance to the science of morals and politics than to that of mathematics."

Another important branch of the duties of this chair is addressed to COMMERCE—what is commerce? what its history? what its influences? what the importance of the merchant classes, and what the subjects which shall employ our future investigations? These are points we proceed now hastily to consider.

It would be affectation to define Commerce. In its largest sense it may be regarded as applying to all the changes and operations performed upon commodities, after the point of their complete production and until that of their consumption; excluding that class or that quantity only which is consumed by its producers. In this respect we regard not merely the questions of bargain and sale, but the thousand others which are concerned in bringing producers and consumers together.

Let us then mark the history of Commerce. To the Phœnicians, some, and the Arabians, others, trace the first dawnings of navigation, or foreign trade. Tyre, of the Phœnicians, was as famed for its traffic, in Holy Writ, as in profane writers. Isaiah calls it the common city of all nations—the center of all commerce—the "queen of cities." Carthage, a colony of the same people, with 700,000 inhabitants, sent out its merchant fleets beyond the pillars of Hercules, along the western coasts of Europe, reaching Britain, and, perhaps, America itself. This from 500 to 1000 years before Christ. The Arabians traded in the Oriental seas, and supplied the Egyptians and Tyrians with their produce. These seas were to them as the Mediterranean to the Tyrians; and Dr. Garcin, in an elaborate tract upon the subject, maintains, that in the Oriental seas—perhaps at Malacca and Guzurate—were found the Ophir and Tarshish, whence Solomon's fleets brought gold and precious spices; being instructed by the Arabians, or, perhaps, even Queen Sheba herself.

Alexandria, under lead of the Ptolomies, now rose in commercial rank, and became the entrepot of the trade of the East Indies, by the Red Sea; by the Nile into Ethiopia; and the Mediterranean to Europe and the rest of Africa. Falling into the hands of the Romans, it still continued to conduct great trade, and was only inferior to the Eternal City in grandeur and populousness. From the opulence it furnished, the Romans were induced to frame their laws for the encouragement of trade. .The Saracens overwhelmed this commercial prosperity, which, though it partially revived again, perished at last when the Portugese stole a march to the Indies around the Cape of Good Hope.

•All Scandinavia and the Northern Hive poured down in the third, fourth and fifth centuries, upon Rome, their myriads of barbarians. Huns, Goths, Vandals, Alarics and Attilas—these terrific men swept away all traces of civilization for a gloomy period, and with fire and sword desolated the whole of Southern Europe. Commerce received a death blow in the struggles of this era.

It is unnecessary to dwell upon that period of darkness and gloom which settled upon the seats of ancient letters, civilization and commerce, when the lights of Rome and Greece had been put out, and bloodshed, anarchy and fierce discord, attained their despotic empire. It seemed as if God had cursed and withered the fair work of his own hand.

If Italy witnessed the flickering and expiring rays of that light which in its full blaze had illumined the ancient world, it was on the soil of Italy that it was re-lit again in the progress of centuries, and it was from thence that darkened Europe caught the first faint beams of morning which broke upon the world. The night of arts, sciences and commerce was dissipated in the lights which shone from the Adriatic and the free Italian republics.

We are to speak of Venice and Genoa, who are to modern ages what Tyre and Carthage were to those which had been numbered before the Christian era. Inspired with the recollections of the past, and full of the holy associations of the moment, Byron, standing on the "Bridge of Sighs," and viewing the ruins of Italian glory,

"Where Venice sat in state throned on her hundred isles,"

with full heart and impassioned eloquence, lamented over the mistress of the Adriatic, her "dead doges," her perished commerce, her "crumbling palaces" and exhausted treasures:

"In youth she was all glory—a new Tyre;
Her very by-word sprung from victory—
The 'Planter of the Lion,' which through fire
And blood she bore o'er subject earth and sea;
Though making many slaves, herself still free,
And Europe's bulwark 'gainst the Ottomite."

Venice, Genoa and Pisa excelled in genius, spirit and enterprise, all the nations of Europe. Driven from barbarian invasion to their retreats, these republics, territorially contracted, and little favored in soil, reached to a pitch of opulence and empire which excites our highest admiration. Their rich argosies went out upon the Mediterranean, and their mariners braved the storms of every ocean. Liberty spoke in their halls, and law resumed again its sway. One of the best commercial codes which the world has ever known, we are told, originated in the councils of Pisa.

Whatever may be thought of the Crusades in this era of the world's enlightenment, all history attests that they introduced into Europe Eastern tastes and customs, and led the way to an extension of commerce, and ultimately to a new era of light, truth and liberty.

Edward III was the father of English commerce. Before his reign no advances of any character had been made in that country to extend its foreign intercourse, but Edward set himself in earnest to build up and establish the kingdom. He invited over from Flanders artizans and workmen, who may almost be said to have originated the manufacturing system of England. It is not a little curious to consider the motives which were held out to this enterprising body of men, as they are furnished for us in a venerable record. They were told that in England "they should feed on fat beef and mutton till nothing but their fullness should stint their stomachs; that they should have buxom wives, seeing the richest yeomen in England would not disdain to marry their daughters unto them." The products of the labors of these craftsmen, feeding upon "fat beef and mutton," to respectable corpulency, became soon known, and famous in the markets of all Europe.

Feudalism began now to totter in the rapid progress of the merchant interests, and went out in that last battle on the heath of Gladsmoor, when Warwick, its great representative—the proud Baron—the "*King maker*"—fell, like a huge tower, under the vigorous strokes of the *Merchant King*.

Ho! what a giant struggle was there. Grander and more awful, says Bulwer, than all individual interests, were those assigned to the fortunes of this battle, so memorable in the English annals; the ruin or fall of a dynasty; the fall of that warlike Baronage of which Richard Neville was the personation—the crowning flower—the greatest representative, and the last; associated with memories of turbulence and excess it is true, but with the proudest and grandest achievements in our history—with all such liberty as had been achieved since the Norman Conquest, with all such glory as made the island famous—here with Runnymede, and there with Cressy—the rise of a crafty, plotting, imperious despotism, based upon the growing sympathies of craftsmen, and traders; and ripening, on the one hand, to the Tudor tyranny, the republican reaction under the Stuarts, the slavery and the civil war; but, on the other hand, to the concentration of all the vigor and life of genius into a single strong government; the graces, the arts, the letters of a polished Court; the freedom, the energies, the resources of a commercial population, destined to rise above the tyranny at which it had at first connived, and give to the emancipated Saxon the markets of the world.

The progress of commerce, says Robertson, in his admirable chapter introductory to the History of Charles V, the progress of commerce had considerable influence in polishing the manners of European nations, and in establishing among them order, equal laws, and humanity. It tends to wear off those prejudices that maintain distinction and animosity between nations; it softens and polishes the manners of men; it unites them by one of the strongest of all ties—the desire of supplying their mutual wants; it disposes them to peace, by establishing, in every State, an order of citizens bound by their interests to be the guardians of public tranquility. In proportion as commerce made its way into the different countries of Europe, they successively turned their attention to those objects and adopted those manners which occupy and distinguish polished nations.

We come at last to consider the subject before us in connection with the past and present history of America. There is reason enough to dwell upon the ample enterprise, and stubborn, unyielding spirit of the people who fled across the ocean from the tyrannies of the old world, and established among the deep forests of the new, the germs of a nation, which has already become great. What could subdue the spirit of a people like this? Rugged as their own wild homes, the infant colonists braved the seas and the storms. They dug the graves of tyrants with the same implements that brought them bread out of the soil. Struggling with the desperate savage at one moment, they braved at the next the fierce storms and monsters of the deep. There is no adolescence in such a people. They spring into manhood's vigor from the infant's imbecility.

* "Whilst we follow them," said Burke, "among the tumbling mountains of ice, and behold them penetrating into the deepest frozen recesses of Hudson's Bay and Davis's Straits; while we are looking for them beneath the Arctic Circle, we hear that they have pierced into the opposite region of polar cold; that they are at the antipodes and engaged under the frozen serpent of the South. Falkland Islands, which seemed too remote and romantic an object for national ambition to grasp, is but a stage and resting place in the progress of their vigorous industry. Nor is the equinoctial heat more discouraging to them than the accumulated winter of both the poles. We know that whilst some of them draw the line and strike the harpoon on the coast of Africa, others run the longitude and pursue their gigantic game along the coast of Brazil. No sea but what is vexed by their fisheries, no climate that is not witness to their toils. Neither the perseverance of Holland nor the activity of France, nor the dexterous and firm sagacity of English enterprise, ever carried this most perilous mode of hardy industry to the extent to which it has been pushed by this recent people, a people who are still, as it were, in the gristle, and not yet hardened into the bone of manhood."

To what, more than to the pressing exigencies and commercial wants of the States of this Union, can be attributed the unanimity with which they adopted that *federal compact* which makes us one toward all the world? Scarcely more than half a century has elapsed since our federal constitution was adopted, and in that period our advance has already rivalled the dreams of eastern fiction. Every sea and navigable water under the face of heaven sees the white wings of our shipping, and hears the bold voices of our mariners. Our flag is upon the deep, and it floats alike at either pole and at the equator—on the uttermost limits of the globe. Great as has been our progress in the past, there is a prophetic voice which tells us that we have but begun to enter upon that bright and glorious "empire of the seas" which is yet to be ours. We have laid the foundation of cities which occupy rank with the Tyres and Carthages of antiquity, and must rival the Londons of the present day. To what is New York indebted for that extraordinary position which she has taken in the republic, but to the centralization of nearly all of its foreign trade in her midst; and New Orleans, at the other extremity of latitude, is she not marching onward in the same pathway at a ratio which is equally amazing?

We have thus rapidly traced the history of commerce; and in regard to its influences, and the importance of the merchant classes, shall be equally as brief.

No empire was ever established, so universal in its sway, so powerful in its control, so capable of binding, indissolubly together, the heterogeneous masses of mankind, as the one over which King Commerce wields his scepter in the nineteenth century. When the rod of this potentate is broken into pieces, we know not where the influence is to come from to bring together again and unite its disjointed fragments. Despite of all the beautiful theories and speculations of philosophy, the *interests* of mankind constitute the strongest and most enduring bond of their union.

Whether for Britain, for France, or for Russia, for the South Seas and the Pacific, or for Republican America, there is but one voice now, and that cries for TRADE. Buy or sell are the pregnant words in every language under heaven. The Rialto is the center of the world's negotiations. For this navies float upon the ocean—for this grave embassies receive audience from the Tamahamas of the Pacific, or talk Chinese with the potentates of the Celestial Empire!

Commerce is a natural guardian of the arts and sciences. Under its influence the highest results have been stimulated. To what, for instance, can the astonishing progress and perfection to which astronomy has been carried be attributed, more than to the ever-arising wants of navigation? The solution of the problem of the latitudes and longitudes has been promised, at different periods, the highest premiums of government. It has set astronomers at toil which only terminated in brilliant discovery. The various problems of navigation even now demand the highest labors of these men in every country, and the mere tables of a nautical almanac—the calculation of eclipses, occultations, and parallaxes—calls into action a degree of scientific skill which can scarcely be appreciated by the uninitiated. The mariner's compass, quadrant, or chronometer, are miracles of art as well as of science. From every nation in the world commerce has brought together her trophies, and laid them at the feet of science. Without leaving his closet the student of nature may arrive at profound results in the investigation of animals, plants, shells, and minerals, scattered over the whole globe—above the earth and under the earth, and down to the depths of the sea Every art and science acknowledges its large indebtedness to the hand of commerce for the influence it is enabled to wield over nature in extending the empire and dominion of man.

Commerce is the parent of civilization. We are acquainted with but one agency which excels it in perpetuating peace and good will among men, and elevating national character, and that agency is Christianity. But even the heralds of the cross, with all their noble and inspiring theme, have not penetrated further into the depths of savage wildernesses or among the fiercest islands of the ocean—have not crossed mountains and deserts more desolate and terrific—have not plunged more fearlessly into the midst of horrid idolatry, cannibalism and semi-demonism, than have these men of bales and merchandises, in their search after trade. They have gone hand in hand with the missionary, where they have not acted as his pioneer. It is thus with the hunters and trappers of Oregon and California, who as far upward as the Russian limit and South to Mexico, prosecute trade with the savage, as yet ignorant of his soul and of his Maker. It is most strikingly thus in the case of the Sandwich Islands. Commerce, acting as the adjunct or handmaiden of Christianity amongst the savages there, has transformed them into men and into citizens. We see a trophy won to civilization—a people added to the Christian nations of the earth.

Let us take the extremest limit of the ocean, the stormiest islet of the sea, struggling against a thousand billows, and what do we find? The sailor and the trader have been there; and the return of the "white wings" is hailed by anxious multitudes, who bring out their treasures, to be bartered for the veriest trifles of civilization. From the intercourse which arises, new wants are stimulated in their bosoms. They begin to think with the new objects which occasion thought. Their views and ideas are naturally expanded to a wider compass, and they are insensibly molded in the type of those who have excited their highest admiration and wonder. Mysterious, beneficent and wise are the ways of Providence, when even the interests of men are called into requisition to work out the great problem of their existence.

Commerce, in fine, is what it has been beautifully entitled: "The golden girdle of the globe." It binds together all the great families of men. It teaches that they are creatures of like wants, errors and necessities. It determines them to be component parts of a great and magnificent system which God has devised, and which requires the concurring movements of every part to be preserved in its perfection and duration. It forbids them to treat, like the ancient Roman, the foreigner cast upon their shores as a barbarian deserving of death, or to confiscate his shipwrecked effects, but urges rather the doctrines of humanity and justice. Even the laws which regulate it are based upon the immutable principles of right, and bind upon the conscience of men from their very nature. As Mansfield, the most celebrated commercial lawyer of his age, said of them, quoting the splendid language of Cicero: "*Nec erit alia lex Romæ, alia Athænis: alia nunc, alia posthac; sed et omnes gentes, et omni tempore una lex et sempeturna, et immortalis continebat:*"—they are not one law at Rome and another at Athens; they do not fluctuate from extreme to extreme; but among all men, and in all times, the laws of commerce are one and immutable.

I shall not, then, be regarded as overrating the importance of the merchant classes. In England, the degree of Thane was formerly conferred upon the successful prosecutor of three voyages. "A prime minister of France, and several grand dukes of Tuscany, are examples," says Mr. Beawes, "which might countenance any one remaining in trade." "Wise and great traders," says Mr. Postlethwait, "have arrived at the dignity of lord chancellors of England, have been created peers of the realm, bannerets, and privy councillors," and he enumerates a long line of such, at the head of which stands Michael de la Pole. It is unnecessary for us to refer to any of the latter or more numerous instances, or to those eminent men who have, in all the States of this Union, from the commercial ranks, done so much to elevate our national character and prosperity. "The splendor, the power, the dignity, being thus raised by trade, it must be unaccountable folly and infatuation to lessen that one article in our estimation, which is the only foundation whence we all, take us as a nation, are raised, and by which we are enriched and maintained."

How important then, that the mercantile classes should be liberally educated for their pursuits; and, in a country like ours, that the citizens of every pursuit be possessed, at least, of the general and leading principles of our commercial operations, which are among the most important of the age.

We have not space in this lecture, but have given, in a printed programme, the course of instruction intended by this Chair the present season, though little more can be expected than to set it fairly into operation. Should the Chair meet with wide and liberal encouragement, adjunct professors might be appointed, under the different important heads—a special hall constructed—library, reading-room, with all the journals of the day, from all countries in the world—to these, add a cabinet of curiosities, to which ship masters could greatly contribute from time to time; and, by a system of enlarged liberality, the whole could be made entirely free and PUBLIC to every one desirous of information. This would be worthy of the great city of New Orleans!

I am sure that this audience will agree with me now in the reflection of Sir Francis Brewster, an eminent British merchant: "I think it a mortal distemper in trade, that we have so few men of University learning conversant in true mercantile employment."

But I will detain you no longer, though some reflections were intended upon the remaining department of the professorship—STATISTICS and AGRICULTURE. I have invited several distinguished gentlemen from other States to deliver occasional lectures, upon subjects of a practical character, and general interest, from this Chair, and thus aid in extending its usefulness. This is a new feature in the University, and these lectures will, of course, be *public*. I shall also deliver occasional public lectures myself, upon subjects illustrative of the progress of our own country, in resources, wealth and power. For under heaven, as it was the destiny of the savage aboriginal, incapable of civilization and with no law of progress ingrafted upon his nature, to fade away before the steady advances of European arms and policy, so the Anglo-Saxon element of America, by its flexibility and its power, by the new elements which it has taken to itself, in the trying yet triumphant scenes through which it has passed, will, and must, in the inevitable course of events, preside over the destinies of the continent of America, aiding and directing them, adding life and vitality, rousing dormant energies, and developing upon the theater of the world movements in comparison with which, all that history can furnish before the deluge, before the era of Christ, and since, shall dwindle into insignificance.

Here are all the elements of greatness combined—the indomitable will, the stern endurance, the inflexible and hardy spirit of independence; the high daring, the lofty patriotism, the adventurous, unlimited enterprise; the genius, resolute, active, intrepid; inexhaustible in resources, elastic in vigor and in freshness, buoyant ever, and hoping on, and executing, amid every trying scene, every difficulty, and danger, and disaster—*triumphing everywhere, and in all things!*

ART. IV.—MANUFACTURE OF SUGAR.

A DISSERTATION UPON THE EVAPORATION OF SACCHARINE LIQUIDS.*

[CONCLUDED.]

THIS demonstration will result from the comparative examination of the Dégrand apparatus with that of Howard, in an economical point of view—not the mutilated apparatus of Dégrand, needlessly complicated and partially perverted, such as it has pleased MM. Derosne and Cail to construct it—but the apparatus as it ought to be, enjoying the plenitude of its refrigerating action, and performing its normal conditions.

The following calculation has for its subject an apparatus which works off 290 hectolitres of juice per day:

This apparatus, we observed on page 118, does not need to evaporate more than 13.500 k. of water per day in its close pan. The close pan of the Howard apparatus, with which we compare it, and which operates upon 290 hect. of juice per day, has been reckoned with its appurtenances at fr. 12,500, because that pan should evaporate 27,000 k. of water per day.

Proportionally, we will estimate the close pan of the Dégrand apparatus and its appurtenances at	8,000 fr.
As to the air pumps, we have said, that the Dégrand apparatus has use for only two small pumps; we will value them, with their small motive power, and pipes of conveyance, at	3,500 "
The Dégrand condenser, in its normal conditions, may be constructed for	5,000 "
The patent right is	6,000 "
The steam boiler required by the Dégrand apparatus has only 600 k. of steam to generate per hour. It, with a furnace and its chimney, may be estimated at	4,800 "
Total,	27,300 "

Such is approximately the first cost of an apparatus of Dégrand in its normal conditions.

If this apparatus lasts fifteen years, the first cost, with compound interest at the rate of 5 per cent. per annum, becomes 56,754 fr.

In working with this apparatus, the expense of each campaign is as follows:

The daily vaporization of 14,500 k. of water, in the ratio of 5.5 kilo. of steam per k. of coal, consumes 2,636 k. of coal, or...	32.9 hectol.
And the air pumps consume	2.4
Total,	35.3

Whose cost at 1 fr. 75, amounts to 62 fr.; which, during a campaign of one hundred and fourteen days of actual labor, amounts to...	7,068 fr.
Fireman's wages,	225 "
Maintenance and repairs,	700 "
	†7,993 "

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* See note to first part in August No., 1849, p. 111.

† The expenditure of a Howard apparatus exceeding 7,707 fr. per campaign that of a Dégrand apparatus of the same evaporating power, it follows that at the end of the fourth campaign the whole first cost of the latter is covered by the saving realized.

This annual expenditure, increased by the 5 per cent. interest during fifteen campaigns, represents a capital of......................	172,470
Add the first cost, increased by interest,..........................	56,754
	229,224
From this deduct the sum the apparatus brings, sold as old iron, supposing it to be unfit for use after fifteen years,.................	3,000
There remains.........................	226,224

This sum represents what it would cost the manufacturer to produce, in fifteen campaigns, 44,631 quintals of sugar. Consequently, the expense attendant upon evaporation amounts on an average to 3fr. 52c. per 100 k. of sugar at each campaign, proportionally to the production, paying attention to the compound interest.

We have seen, that in operating with the Howard apparatus the analogous expenses of evaporation amounts to 6fr. 36c. per 100 k. of sugar produced. The difference in favor of the Dégrand apparatus is 2fr. 84c.

This finished, it only remains for us to calculate the influence which this difference exerts upon the fortune of the manufacturer, during the fifteen years of use of either apparatus, always having regard to the compound interest.

The total production of sugar in fifteen campaigns, being 44,631 metrical quintals, that of each campaign is 297,540 k.—an excess of expense of 2fr. 84c. per 100 k. upon this weight amounts to 8,450fr.; and this annual loss during fifteen successive crops, affects the manufacturer using the Howard apparatus. The sum of these losses, with compound interest at 5 per cent., amounts at the end of fifteen years to 182,386fr.

The same result may be arrived at in a simpler manner, by subtracting 226,224fr., the amount of expenses for evaporation, by the Dégrand process—from 408,610fr., the amount of those incurred by that of Howard.

Although we have taken for one of the elements of the preceeding calculation, a period of fifteen years for the service of a vacuum apparatus, we are far from admitting that a well made machine is useless after that term. If, in place of calculating upon fifteen years, we had based our calculations upon twenty, we should have found a difference of 275,271fr. in favor of the Dégrand apparatus, instead of 182,386fr.

There are many manufacturers, who, in the raspage of the beet, introduce water into its juice, in a proportion which varies from 20 to 35 per cent.—say a mean of 25 per cent. In this case, when it is desired to produce 297,540 k. of sugar per crop, there is not only 27,000 k. of water to evaporate per day with the Howard apparatus, but 33,750; and with the Dégrand apparatus, 18,125 k. must be vaporized instead of 14,500. Consequently, the difference in favor of the Dégrand apparatus over that of the Howard is increased by the consumption of coal necessary to evaporate 3,125 k. of water in addition per day, or 359,250 k. per campaign of one hundred and fourteen days, which evaporation costs 1,429fr. This annual increase, with compound interest during fifteen years, becomes 30,835fr.; and during twenty years, it becomes 47,250fr. Thus, in the hypothesis of fifteen years, already calculated, the difference in favor of the Dégrand apparatus over that of Howard becomes 182,386+30,835=213,221fr. In the hypothesis of twenty years, it would be 275,271+47,250=322,521fr.

The comparative calculation which we have just developed, demands the most serious attention of sugar manufacturers, with so much the more reason, as it is susceptible of a train of application, apart from that which we have taken as an example. They should not confine themselves to the numbers used in this calculation, in estimating the expenses or service, because these data are susceptible of variation: for instance, in the cost of the machines, made by different constructors—in that of coal, depending upon the locality—in the yield, depending upon the soil, the seasons and the skill of the manufacturer, &c.; but they ought to confine themselves to the method of calculation, and to the economical principles upon which it rests. We repeat that economy in industry consists only in the employment the most profitable that can be made of the disposable capital; we cannot estimate the influence which any mode of working whatever exerts upon the fortunes of a tradesman, but by compounding the interest during the progress of the work, because his economy as well as his profits become capital in his hands gradually as it is realized.

Sugar manufacturers who use only the constructions of MM. Derosne and Cail, are able to judge but imperfectly of the saving in fuel due to the Dégrand apparatus, and they are also unable to judge of its products in sugar. In placing, uncovered to the surrounding air, the two rows of tubes which compose the condenser of this apparatus, these constructors have suppressed the rapid current of air, which, according to MM. Arago, Dulong and Dumas, of the Institute, is the cause of a very rapid cooling. This mutilation of the Dégrand apparatus, produces the same effect as that which would be produced in the Howard apparatus, by suppressing one-half the cold water required for its service—that is to say, it produces the effect of not pushing the depression (de ne pas pousser la depression), as MM. Derosne and Cail term it, beyond 40 to 45 centimetres in the evaporation of the juice to 25° B., and beyond 48 to 60 centimetres in the evaporation from 25° B. to concentration, a vacuum which MM. Derosne and Cail declare they have observed to be sufficient.

We have already proved the insufficiency of this vacuum by the example of English refineries. We will now bring another proof to bear, to which MM. Derosne and Cail cannot take exception, because it emanates from themselves. There is, besides, a well known fact, which can be verified in the sugar factories where they have placed the Dégrand apparatus, and which they have also put in evidence at the last exhibition (exposition), a fact which they have admitted on page 295 of the "*Publication Industrielle*," before cited, viz., the interposition of an injection condenser between the Dégrand condenser and the air pumps; this interposed condenser having for its duty to liquify a portion of the steam emitted by the pan—in other words, to reduce the vacuum in the pan to the degree which has pleased MM. Derosne and Cail to recognize as sufficient. This interposition is very significant; it demonstrates, 1st. That the Dégrand condenser, such as MM. Derosne and Cail construct it, and such as they deliver to their customers, being left to its own power, cannot reduce the temperature of the syrup to 81 or 77° in the evaporation of the juice, and to 75 or 62° in the concentration of the syrup. 2d. That in order to obtain this reduction, these constructors are obliged to have recourse to an auxiliary condenser, operating by the injection of water—that is to say, a condenser which produces only a single effect, from which arises the wastage of all the latent heat of the portion of steam which is condensed by the injection of water. 3d. That the temperature to which the juice and the syrup are exposed during their evaporation must injure the sugar; and hence, the results in sugar which are obtained by the apparatus coming from the shops of MM. Derosne and Cail, do not represent the results which would be obtained by an apparatus of Dégrand established in its normal conditions—that is to say, they no longer represent what they would represent in an apparatus of Howard, which, in place of operating by means of a sufficient quantity of cold water, operates only by means of a mass nearly double.

Hence, it follows that the auxiliary condenser, to which MM. Derosne and Cail have recourse, is not only a complication, powerless for operating in the useful conditions, but it constitutes also a partial perversion of the Dégrand apparatus. Moreover, this auxiliary condenser not only wastes a portion of the heat which should be used by the manufacturer, but it also induces the necessity of more powerful air pumps—consequently more costly, and more expensive in fuel—which would not be required for the service of a Dégrand condenser, well understood. We are then warranted in saying, that MM. Derosne and Cail have mutilated the Dégrand apparatus, which they have needlessly complicated, and which they have partially perverted.

We have already demonstrated that the Howard apparatus, vacuum with single effect, working by injection of water, coming from the shops of the same constructors, is in opposition to the natural laws which govern the evaporation of saccharine liquids.

It now remains for us to speak of the evaporation of saccharine liquids in vacuum to the consistence of solidity.

It is mentioned in Howard's patent of the 20th November, 1813. It is to him, then, that the first idea of it is due.

Through the persuasion of MM. Derosne and Cail, and Mr. Archbald, several factories were arranged during the last campaign for defecating the juice, by means of ingredients, patented in the name of Mr. Archbald, for filtering it upon large masses of course grained boneblack, and for evaporating it to dryness in vacuum apparatus with water injection furnished by MM. Derosne and Cail. The manufacturers who purchased these ingredients and apparatus, believed that by these means they could immediately make very beautiful and very good sugar without the production of molasses.

Let us examine whether these results can be realized by the means used.

In the first place, as to the ingredients which Mr. Archbald presents as patented, and whose composition is specified in a patent of 5th October, 1843, in the name of MM. Lindman, Luzanne and Archbald, they consist of alum, lime and chalk. The chalk playing no part here, the alum and lime remain the agents of defecation, known and used for a long series of years; and it could not be expected that Mr. Archbald would manage them with more skill than the most advanced sugar manufacturers—neither could it be expected that he would manage the filtrations upon large masses of course grained bone-black better than these manufacturers.

The juice treated with the ingredients which Mr. Archbald sold to the manufacturers, could not be, consequently, more pure than that to be had in good factories; it is probable that it was less pure, and it is certain that it must inclose some damaged sugar and molasses, since the juice of the beet which is obtained in the most improved factories contains some.

However, we cannot bring immediately into the state of beautiful and good concrete sugar, freed from molasses, a saccharine solution which contains molasses, when, in order to accomplish this transformation, the only means made use of is that of evaporating the water contained in the solution, however perfect may be the method by which the evaporation is conducted. The reason is, that pure and simple evaporation can never have the effect of converting molasses into crystalizable sugar.

If, instead of using a perfect means of evaporation for vaporizing the saccharine solution, we employ the vacuum pan with the water injector, such as MM. Derosne and Cail have made for evaporating to dryness, it will be necessary to add to the molasses, pre-existing in the solution, that which is generated in their apparatus—an important addition which is a consequence imposed by the peculiar arrangements of their irrational constructions. Between the bottom of the pan and its dome, a cylindrical portion is interposed, which contains a large volume of saccharine juice, and two superposed serpentines to heat it. The heating steam is elevated to the temperature of 150 or 156°. The work is conducted in the following manner: First, enough of juice is introduced into the pan to cover the serpentines to the depth of 10 centimetres, the top of the juice then being 50 centimetres above the bottom of the pan; and, from time to time, juice is added to keep the serpentines thus covered. Whole hours pass before the sugar is reduced to dryness. There is no thermometer in these pans indicating the temperature of the solution; but, from the indications of depression furnished by MM. Derosne and Cail, it is known from the commencement of the operation, that this temperature is 93°, and that it then falls to 87°, at which time the saccharine solution approaches the point of usual concentration. From this epoch until that at which the sugar is deprived of the water of solution, its temperature cannot be known, neither can it be inferred; because the sugar, having lost its fluidity, retains with great energy the viscous syrup with which it is mixed, and because, consequently, the steam which is disengaged, is not saturated. Yet, it can be said, that this pasty mixture becomes gradually in equilibrio in temperature with the steam which circulates in the heating serpentines. It is under the influence of these high temperatures, acting for whole hours, that the sugar is dried in the pans made in the shops of MM. Derosne and Cail. Consequently, a very considerable portion of the sugar submitted to this influence must pass into the condition of molasses, and the tinge will be a straw yellow, because the juice was filtered on large masses of course grained bone-black.

It follows, from what we have just mentioned, that the juice concreted by the means suggested by MM. Derosne and Cail, and Mr. Archbald, contains molasses before its introduction into the evaporating pan, and that the proportion of molasses increases notably in course of evaporation.

When sugar containing molasses is evaporated to dryness, the following action occurs: The elementary crystals, otherwise called the rudiments of crystals, to which the concentration of the syrup gives birth, making their appearance in a liquid too dense and too viscous to be able to come into juxtaposition with each other in the spontaneous and natural conditions for the formation of regular crystals, it happens that the molasses interposed between the forming crystals opposes the attractive force which tends to unite them—a resistance which it cannot surmount. It is a general law of crystallization, that crystals cannot take their development but in liquids of little density, which, in order to distinguish their function have been called *mother-liquors*. With regard to the crystals of sugar, the proof of it is seen in all the refineries, as well in those which use the vacuum apparatus as in those concentrating under exposure to the air, where a beautiful and good brown sugar yields only from 50 to 51 per cent. of refined at the outset; the mother liquor in which this crystallization is effected, being then brought to the point of concentration, gives a second crop of crystals; a third evaporation gives a third crop; but these successive crops are obtained only in mother liquors so little viscous that the crystals may take in them their normal developments.

The principles which we have exposed conduct to this consequence: that it is impossible to bring the juice of the beet into a concrete condition, into beautiful and good sugar, without production of molasses, by the method which MM. Derosne and Cail have represented to their customers as infallible. However, in flattering them into the belief of this chimerical idea, they have succeeded in selling their machines.

After the first campaign, the enchanted castle, built upon such ephemeral promises, is seen to crumble. The manufacturers who had believed these promises, obtained sugar which passes into a pasty condition upon contact with the atmosphere, and which purchasers denounce as bad merchandise. It is to the presence of molasses that this sugar owes its deliquescence. The molasses may be more or less colored, but whatever its shade, it is always hygrometric. In vain is brown sugar dried in a stove—it will always, on contact with the air again, take up the water of which it had been deprived by dessication. Pure sugar, on the contrary, is unalterable in the air. And not only have these machines made pasty sugar in place of loyal and receivable sugar, but it has besides 12 per cent. of molasses. In adding this proportion of molasses to that which is inclosed in the pasty sugar, it is found that these machines make as much molasses as those working by direct exposure to the fire and air. The only difference is in the shade.

In concluding this subject, we say, that these great facts of practical experience have shown, so far as the manufacturers are concerned, a considerable loss during the last crop, and their establishments are now conducted upon a radically vicious system.

Taking a view of the whole of the vacuum apparatus, either single or double-acting, coming from the shops of MM. Derosne and Cail, we conclude that these constructors have caused to retrograde the art of evaporating saccharine liquids, so far as it depended upon them.

We intend to give soon a design of the apparatus of Dégrand, such as it should be when acting with its full refrigerating power, and whose attendance does not present greater difficulties than that of the same apparatus made by MM. Derosne and Cail.

E. DÉGRAND,
Paris, June 4, 1845. Civil Engineer, 14 Rue Richer.

ART. V.—INDIANA—HER RESOURCES AND PROSPECTS.*

HISTORY OF SETTLEMENT—ADVANCE OF POPULATION; DEVELOPMENT OF RESOURCES; EXTENSION OF PRODUCTS; INTRODUCTION OF MANUFACTURES; FACILITIES FOR MANUFACTURES; COAL AND IRON OF INDIANA COMPARED WITH GREAT BRITAIN; UNLIMITED NATURAL RESOURCES OF INDIANA; POWER OF MANUFACTURING NATIONS: THE WEST MORE FAVORABLE TO MANUFACTURES THAN NEW ENGLAND.

AT the commencement of the present century the *Territory* of Indiana, including what is now Illinois and Michigan, numbered less than 5000 people whose labors were impeded by 100,000 hostile barbarians. At the close of the first quarter of the century, the State of Indiana contained a population of 200,000, and the census at the termination of the half century will enumerate more than one million of free people within her boundaries. Yet her extended surface will then be but dotted here and there with improvemonts. In most of her counties there will be then thousands of acres as still and wild as when the foot of the white emigrant first pressed the northern shore of the Ohio. Tens of thousands of strong arms with fire and steel are filling her forests, yet the results of their labor are barely perceptible.

In 1825 the emigrants to Indiana were chiefly from the eastern States; their journey was made after long preparation and was toilsome, slow and expensive. They were compelled to bring their heavy tools and bulky implements of husbandry, their kitchen utensils and fragile furniture, by a difficult navigation and over heavy roads; several years were required to make a small clearing, rude improvements and enough coarse food for domestic use. Yet, despite all these difficulties, the population of the State has already quadrupled since that period.

Now, the emigrant from beyond the Alps gathers and sells his summer's crop, crosses the ocean, passes the Alleghanies, selects his farm, erects his cabin, and puts in his plow in the following spring; he has wasted neither time nor money on the way: he comes with his means and health and energies unimpaired—he becomes at once a producer and is at once an addition to the productive capital of the State.

In view of these points of difference; of the removal of the causes of disease; of enlarge d social, educational, and religious advantages; of greater facilities of intercommunication, and of the greater attraction presented to all classes of emigrants, what limit can we fix to the increase of the State during the remaining half of the century? We cannot rely on ordinary rules in the computation; we have not only to ascertain what number the State can employ and sustain, but the comparative profits to be made here and elsewhere by labor and capital. In the valley of the Mississippi are very many millions of acres yet unoccupied, while Oregon and California present real and unreal attractions to the restless of older countries. The overtaxed and underfed masses of eastern Europe long for our cheap food. The capital of eastern and central Europe is insecure and highly taxed, and its possessors would place it under our stable and inexpensive government. On our seaboard, land, compared with ours, is dear and unproductive; the hills of New England, the sandy plains of the Carolinas, and the worn out soil of Virginia, offer few inducements to the generations rising upon them.

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* The reader will find various other information relating to Indiana, in our back volumes, especially in Vol. I, 1846.

The eyes of all are turned westward, and hundreds of thousands are now carefully studying the guide books and maps of this West, and gathering and collecting all the attainable facts by which their future course and location will be determined.

During the present year the number of emigrants to the United States will probably exceed 300,000. Of these not over 50,000 remain on the seaboard, and our accessions from the Atlantic States probably exceed the emigrants who remain there. The natural increase of the population of the countries from which we receive most of these emigrants is about two millions a year, and, as the facilities of emigration are yearly enlarged, it will not be considered as too high an estimate, if we set down one-fifth of that increase, or 400,000, as the yearly average of emigrants to this country during the next quarter of a century. This number and their natural increase will be, during that period, not less than thirteen millions; we shall have in 1850, about 12,000,000 and their increase will be over 10,000,000, giving an aggregate population, in 1875, to the valley of the Mississippi of 35,000,000. The larger proportion of this increase will, for obvious causes, be north of the Ohio river.

If Indiana will now ascertain and develop and publish her resources; if she will fairly describe her mines of wealth and fully and truly set forth the advantages she possesses—twenty-five years will give her a population of five millions, and, at the close of the century, the constituents of her representatives in the councils of the nation may outnumber the present population of the United States.

As to the actual capacity of the State to sustain such numbers, there can be no question. It has 20,000,000 of acres susceptible of high cultivation, and, under the present best modes of husbandry, these acres can be made to yield not only enough substantial food for 100,000,000 of people, but flowers to decorate the dressing table of every female, and fruits to furnish a dessert to every family for every day throughout the year.*

Indiana has forty miles of lake coast; the Ohio for 370 miles washes her southern border; the streams intersecting her interior counties give over 2,000 miles of flat boat navigation at a season when her produce is ready for shipment. By the Wabash and Maumee, passing diagonally through the State, she is connected with "the Father of waters" and the lower series of the great lakes; by lake Michigan, she can conveniently exchange products with the vast country bordering on lake superior; the surface of the State is so level, and the materials for the construction of railroads are so abundant, that her people can quickly and cheaply connect themselves with each other and with adjacent States, and can thus obtain ready and cheap facilities for transporting what they desire from abroad and the surplus for foreign markets, while their central position in reference to the valley of the Mississippi will give them, to the end of time, controlling advantages in imports and exports of which we now have an indistinct conception.

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* By Mr. Wakefield's estimate, an acre is capable of supporting more than five persons with food.

To descend from generalization to known facts, and give reason for the faith that is in us, let me refer to the causes of the agricultural wealth of the State.

In a report that does but partial justice to Indiana, simply because the examination on which it was based was too limited, Dr. Owen says, and most justly:

> "The fertility of the soil of Indiana is universally admitted, yet few are aware that this arises mainly from its geological position. It is well known to geologists that that soil is most productive which has been derived from the destruction of the greatest variety of different rocks, for thus only is produced the due mixture of gravel, sand, clay and limestone, necessary to form a good medium for the retention and transmission of the nutritive substances, be they fluid or seriform, to the roots of the plants. Now, Indiana is situated in the middle of the great valley of North-western America, and far distant from the primitive range of mountains; and, accordingly, her soil is formed from the destruction of a vast variety of rocks, chrystaline and sedimentary, which have been minutely divided and intimately blended together by the action of air and water. It has all the elements, therefore, of extraordinary fertility."

Here we have the reason not only why the prairies and alluvials of Indiana are so peculiarly adapted to the culture of the cereals and the grasses, but why the hilly and the rolling lands between the eastern fork of White river and the Ohio bear such a weight of forest growth? This may be said without further commentary, that nearly all the products of the temperate zone, necessary or desirable for the sustenance of man and useful beasts, will reach perfection in quality and abundance within the limits of the State, which is, in respect to food, nearly independent of the rest of the world.

But, although agriculture is the foundation of a nation's wealth, it is but the foundation; other interests and employments must rest thereon, to complete the fabric of a nation's glory. To eat, drink and die, is the destiny of a grade in creation lower than our own.

The more fertile the soil, the less labor required in the production of food, the more labor is demanded in the supply of other wants. We call those wants artificial; but, although the forms of supply are artificial, the wants themselves are as natural as the cravings of appetite.

Here but one working hour out of five is required for the production of food. We have four-fifths of our population to be employed in other pursuits.

Now how shall these spare hours and this surplus labor be employed with most profit to individuals, and with the greatest advantage to the whole?

Indiana is now emphatically agricultural. Up to 1843 its supply of agricultural staples was, on the whole, within her home demand. Since that period it has had a large and a largely increasing surplus, and its producers now look anxiously over the world for consumers.

Its neighboring States are in the same condition; all of our staples are superabundant. Dearths and floods at home, and wars and famine abroad, afford us but insufficient relief—he is most fortunate who can first reach a deficient market. As we cannot hasten the rise of our streams, through which our produce finds a natural outlet, we are all entering into competition with each other in making canals and railroads toward the great markets of the world. When these are completed we shall find ourselves precisely as we were; away from home, on expense, and bidding against each other for the dollars of foreign hucksters. We shall then, as now, be fleeced on the way, plundered at the market, and, if we have anything left, run the risk of being robbed on our return. The longer the road, the more numerous the dangers; the further from home, the fewer the chances of detecting imposition, and of bringing those to justice by whom we have been injured.

Even with railroads and canals, with every possible facility of transporting our provisions and breadstuffs to eastern Europe, with far less profits on our capital, and with far lower wages for our labor, can we compete in France and England with the fifteen millions of serfs between the mouths of the Vistula and the Dnieper who grow similar products for exportation? The noble landholders of Poland, Podolia and Volhynia do not allow their slaves to eat what can be sold. These districts, almost as fertile as our own, are now producing as much grain as will supply the deficient markets of Europe, and yet the traveler through them can hardly procure a wheaten loaf. Bring what it will, this grain must be exported and sold. The crop is like that of cotton—useless at home. Until then, we can send our wheat and flour to Liverpool, at a less cost than the transportation of the same article to that port from Dantzic and Odessa, and then, until we reduce its price at home to zero, it is useless for us to enter the field of competition with Russian nobles and Polish slaves.

But we have one certain and speedy mode of relief. We have a labor-saving process by which we can avoid the waste of time and money now employed in carrying over the world the bulky and perishable articles we produce and the heavy fabrics we consume. We need not continue to pay strangers for watching our corn-cribs and meat-houses in foreign countries, for we can bring the mouths to our food.

The makers of anvils at Birmingham, of trace chains at Sheffield, of plates in Staffordshire, of cotton cloth at Manchester, would come here and eat twice as much food as they do now, if they only knew that they could make anvils, chains, plates and cloths, as cheaply and well here as there. It is cheaper to pay the freight on advertisements than on axes and scythes. Pay some trifling bills to the printer, and these foreign consumers will soon hasten to our well-filled granaries. As fast as they come, they will do our shop work, and help pay our taxes. If they do not come fast enough, we must encourage our carriers to learn the use of the awl and hammer. If the men who are now, directly and indirectly, engaged in the export of our bulky products, such as corn, and in the import of such heavy articles as trace chains, were employed here in the fabrication of what should be made at home, we should save more every year than the amount we yearly receive for our entire exports. Should we, in process of time, make more plates and plows than we need at home, we can send the excess to Odessa if there is no market nearer. The products of skill will bear transportation and pay high wages.

But combine our food with cotton, wood, hemp and iron, and you can send it to Moscow; to the sources of the Nile; and to the foot of the Himalaya Mountains; and while we grow rich, we can pay high wages to every intermediate agent.

Let me now illustrate how this change can be effected; how our wealth can be increased; and how our independence can be established. And let me say that, in effecting all this, no law is required but the law of liberty: the liberty of associating labor, skill and capital, so that the many can accomplish what would be beyond the power of the few. No bounties are necessary, but those which result from a business well conceived, and prudently conducted, in security, and without exactions. No State expenditures are called for, save the wages of the schoolmaster, and the printer, and their co-workers, the engineer, the geologist and the chemist. The parent State best discharges her duty to her children by affording them such an education as will enable them most wisely to select, and most efficiently to pursue, their respective employments. This educational care should not be limited to the village school. The same purposes in view, when establishing common schools, are embraced in any system by which we may furnish our adult population such information as will enable them to use their time and positions most productively.

The information referred to, the motives to influence action, the employment to attract labor, should chiefly emanate from the capitol. The ruler there, is but the teacher, and there, knowledge can be made the most effective power that rulers ever possessed. Whatever change of pursuits; whatever great work is there conceived, illustrated and clearly shown to be of profit—the people, with their irresistible force, will speedily accomplish.

Legislators, then, have far more power than Cheops. He could, by his arbitrary will, direct the masses to build a pyramid for the dead; but the pyramid was not reproductive. They, by imparting the knowledge of profitable employments, can influence the masses to construct workshops for the living, which will be reproductive until man shall have ceased to accumulate.

In nothing is progress more clearly shown than in industrial associations, and in nothing have we so marked our advantage over other countries as in the ease with which our associations can be organized, and the perfect security with which they can be carried on. They ask no monopoly, yet they can effect all that is desired. Elsewhere, and in other times, the few have determined what direction the labor and capital of the many should take. To say nothing of the innumerable schemes undertaken by government, or by chartered monopolists, ostensibly for the public good, but in reality as an excuse to levy taxes and support the powerful, we find that nearly all the great changes that have been effected in industrial pursuits, called for by the circumstances of the times, have been effected by the representatives of the State, whether king, parliament or ministers. It was the proudest boast of Henry the Great, that he had introduced the culture of silk among a people who lacked profitable employment. Edward III, when he brought over to England the spinners and weavers from Flanders, and thus laid the foundation of England's power and greatness, did more for his country than any king of his line. The States of Holland showed their practical wisdom when they reclaimed so many thousands of acres from the sea.

We, in the freedom of action, and in the aggregate of individual power, are effecting far more than governments ever could do. In the State of Massachusetts individual capital and labor began to associate, in 1833, to construct railroads. The emperor of Russia put his laborers to the same work in 1836. The little State has made a network of railroads through all her valleys, while the single line of the Autocrat is yet incomplete. Since 1836, our twenty millions of people, by their associations, have made over 7000 miles of railroad. Europe, with her population of 233 millions, has, in the same time, constructed less than 10,000 miles; and the largest part of these have been the work of individual companies.

But, while the government need not be called to aid in the construction of a railroad, the building of a manufactory, or the opening of a mine, it is not less its duty to gather and publish all the facts bearing on the road, the profits of the manufactory, the importance and position of the mine. The individual hesitates to incur the expenses of surveys and experiments, because the road may not come near him, and the ore may be of better quality on his neighbor's land. The association cannot be got up without a fair prospect of success. But the State has broader lines, and the expenses of her surveyors, geologists and chemists, divided among the many, are not felt.

It will be granted that, if neither old markets are enlarged, nor new markets opened, for our agricultural staples, these must fall in the ratio of the increase of production; and it will not be very wide of the mark to say, that the aggregate value of these staples will not be very much enlarged, whatever the increase may be. The history of the cotton crop shows frequent instances of this, when our production has materially lessened its average value. The throwing a large quantity of spices in the Zuider Zee, raised the value of the remainder to an amount far above what the whole would have brought, when the supply was greater than the demand.

Now, suppose the average increase of population in Indiana, for the next few years, should be 120,000 per annum, and that, of these, only 40,000 are productive, and are directed to new employments in which the average remuneration for labor would be seventy-five cents per day; the product is $9,000,000, or two-thirds of the entire export of the State. Suppose, further, that manufacturing employments were provided, suitable for female labor, giving but 25 cents a day for 200 days in the year; the operatives being chiefly from the ages of 15 to 19; and the remaining 100 working days in the year being spent by these operatives at common schools. Fifty thousand females, whose labors are now almost entirely unproductive to themselves and the State, would gladly avail themselves of such opportunities of providing themselves with a dowry. The product of their labor of the year, would be two and a half millions of dollars.

It is beyond our power to calculate the effect that such an amount of earnings, such a saving of money and of such a home market, would have on the values of land and labor within the State.

The premises, that over production lessens the value of the product, being granted, it cannot be said that the withholding the product of the surplus labor will lessen the value and quantity of the commodities obtained from abroad, or our ability to pay for what we should import, or the ability of foreigners to pay for our produce, which they require. Indeed, both parties would divide the savings made in the avoidance of the unprofitable carriage. Let the carriers, if too abundant, engage themselves in the production, instead of the transmission of wealth.

To illustrate my idea, let me suppose that we make our axes and import our watches. The whole manipulation about the axe may require two days of labor. That about the watch may require the labor of two hundred days. The one worth one dollar and the other one hundred dollars. The carriage of the least valuable is one-half of its cost, that of the most valuable, including insurance, is not one hundredth part of its cost. Now the savings on our axes and such heavy commodities, will enable us to buy and import the watch and such light and less bulky commodities. In buying the axe we support the foreign labor of two days. In the watch we buy, we give the equivalent of two hundred days. Thus, in precisely the same ratio that we save carriage and make our coarse fabrics at home, we have the means, and we furnish foreigners with whom we trade with the means, to render mutual exchange profitable; and in this way only can we keep up the prices of our labor, and take every possible advantage of the cheap labor of other countries; and thus arises the axiom, that a country that does not procure at home the necessaries of life, has but a very limited ability of procuring the conveniences and luxuries of foreign fabrication.

The leading principle of political and productive economy in civilized countries, is independence and the substitution of domestic for foreign exchanges. Progress is most rapid in that country which possesses and uses the elements for producing exchangeable commodities at home.

This is the age of steam, and coal is now the chief element of physical power. Let coal, and its near neighbor, iron, be combined and operated by the hand of skill, and the woman and the child can laugh at the hands of Briareus and the strength of the Titans. The chain of Otus and Ephialtes can no longer hold a god. Mind now asserts her full supremacy over matter.

With all these elements of power, with every facility for obtaining the rich results of skill, the people of Indiana will not long compete in the Liverpool market with the white woman of Poland, shrinking under the lash of her overseer, nor with the naked Fellah of Egypt, nor with the degraded Riot of India, in commodities which the earth yields in abundance and without the instruments of skill.

In reference to this power the geological map of the world affords a most interesting study.

The most important and available coal formations are those of the United States, of northeast British America, of Great Britain, Belgium, and France. Of the areas of coal, now known, these in the United States comprise one-seventeenth of the whole, or over 133,000 square miles. British America has 18,000 square miles, Great Britain about 12,000, Belgium 518, France 1,719. Of the 133,000 square miles of coal in the United States, about one-half is the field of the central west, a part of which underlies about one-fifth of Indiana. This State then, has thirteen times as much as Belgium, four and a half times as much as France, and two-thirds as much as Great Britain. The map, however, gives but a very imperfect idea of the respective values of these coal fields. In heavy and bulky articles *position* is everything. The first boat made by Robinson Crusoe after his shipwreck was admirably adapted to his purpose, could it have been moved to its point of use. There is coal on the borders of the Arctic ocean, and there it will be until the last conflagration.

The coal of Europe is on the whole inferior to our own in quality, and its position averages five hundred feet "under the grass." The amount of labor and capital required to dig and raise this coal, is greater than that which would be required to dig that of Vigo county and transport it to Indianapolis. But, coal derives its greatest value from its juxtaposition to other minerals and materials with which it is to be combined, such as iron, copper, lead, timber, and the fibres of which cloth is made. The nearer these materials are to each other, the more valuable each becomes if they are there combined, and they impart a corresponding value to the nearest food and labor.

If we institute a comparison between England and Belgium, and Indiana, in reference to the positions of their respective coal fields and to the source of supply of materials to be combined with the coal, the result may be full of encouragement to us.

Great Britain now produces yearly, 31.500,000 tons of coal, worth, at the points of production, about $46,000,000, and at the points of consumption, chiefly within the kingdom, about $100,000,000. The value of the iron manufactured by a part of this coal, is estimated at $80,000,000 per annum. The value of her exports, produced mainly through the agency of her coal and iron, now reaches the enormous sum of $250,000,000 per annum.

Her cotton mills, alone, give employment to 1,500,000 of operatives, whose yearly wages are $43,000,000.

Of the materials used in combination and produced in the kingdom, the iron stone of Wales yields but 18, and that of Northumberland but 20, per cent.; the copper ore of Wales yields about 8 per cent.; the tin of Cornwall has to be protected from foreign competition by an impost duty of 80 per cent.; the lead mines are falling into decay; the quantity of flax, wool, and hides, is vastly insufficient for the demand; while the value of her food may be estimated by the price of wheat in her manufacturing districts, which will average over one dollar and ten cents the bushel.

For foreign materials, Great Britain sends to Japan, Cuba, and Lake

Superior for copper ore, to China for tin, to South America for hides, and to Spain for wool.

Her nearest food market is on the Baltic, and her chief supply of cotton is from this valley. She is now using our coal to cheapen the cost of Indiana pork and Tennessee cotton on its way to Manchester to be combined with her inferior coal. A singular anomaly! But the most mortifying feature of the process is, that she pays us with the products of our own pork, cotton and coal; she takes five bales of cotton and balances the account with one of cloth; she pays us one barrel of flour for ten bushels of wheat; as to coal, she is more liberal, for she allows us 7 cents a bushel and only charges 14 cents.

Belgium produces coal and iron at about the same cost as Great Britain. She has no domestic material to combine with the coal, but iron, wool, flax, and food, and can only compete with England in manufactures, while her food is equal to the demand, and while her government is less expensive.

In the fifteenth century, the cities of Belgium were the most important seats of the commercial and manufacturing world. Bruges and Antwerp contained each 200,000 people; the Scheldt, at Antwerp, often contained 2,500 vessels waiting their turn of approach to the wharves, and her exchange was attended twice a day by 5,000 merchants. Ghent contained 50,000 weavers. Progress in all the arts and sciences kept pace with the increase of business and wealth. The decline of Belgium in the fifteenth and seventeenth centuries, was the consequence, first, of foreign dominion, and next, of the use of coal, and the introduction of labor-saving machinery by English manufacturers. But within the present century, she has advanced with wonderful rapidity. Her mines have given vitality to her work-shops, and her miners and artizans have so stimulated her agricultural industry, that her sandy and clayey soil has become the most productive in continental Europe, and, while it sustains a population of 350 to a square mile, furnishes large quantities of food, flax and wool for export. Her railroads, which are the instruments of her artisans and agriculturists—as much as their tools of trade, as the hammer and plow—now connect every portion of her territory; her people are busy and well paid, and notwithstanding they labor under some oppressive exactions, they have been scarcely affected by the recent revolutions around them.

Let us now turn to the twenty-two counties of Indiana which give an area of 7,700 square miles of coal—of that power which has proved so potent in England and Belgium. It is safe to say that this area will average 50,000,000 of bushels to the square mile. Here we have the enormous quantity of 385,000,000,000 bushels; or an amount equal to eleven hundred times the yearly production of great Britain. It will be remarked that *this power is just where it is wanted*, at and near the confluence of important streams. Nature has been very kind, and in the course of years, has worn down convenient roads to and through these coal strata. The "adit levels" are the Ohio, the Wabash and the White rivers, and the natural is far more efficient than the artificial drainage. These streams, thus cutting the coal, extend through and to almost every county of the State, and afford cheap facilities of transporting bulky products to points where they can be combined with the power into forms of less bulk and weight, and of greater value, and thus fitted to bear transportation to the best market.

It will be observed that, on the edges of this coal field, there is iron ore of greater yield and purity than that of England or Belgium; potter's clay equal to that of Staffordshire; lead, silicious earth and alkalies, to compare with any in Bohemia; here, also, is the best of marl, the best stone for building and manufacturing purposes; here, besides, is the soft freestone water, and below the surface is, doubtless, brine of sufficient strength to justfy boring through the superincumbent sandstone and the construction of salt works.

Although no copper has yet been discovered in this district, the coal approaches within one hundred and ten miles of Lake Michigan, and a railroad on this route will, before long, be used in transporting to the coal the richest copper on earth—that of Lake Superior. Unless the coal basin of Michigan should prove of more value than is now expected, this copper must, of necessity, be smelted either on the north-east edge of the central coal field, or on the north-west edge of the Appalachian coal field, back of Cleveland and Erie; on the whole, the advantage in distance and in the superiority of a food-producing district, is with the former. In Wales, the copper ores average about eight and a half per cent. of metal, and require nearly twice their weight of coal in the smelting process. The ore of Lake Superior, which is of astonishing richness, will require a larger proportion of fuel, and it will be brought here for use as well as for fuel. From present indications, the copper refineries and manufactories of the Upper Wabash will eventually be the most important in the world, if, indeed, they do not distance all competition. And that day is not far remote, when this copper will be largely used in sheathing vessels built on the Wabash, of Indiana timber.

This, at the first view, may seem strange; but when it is borne in mind that the merchant marine of almost every country is now built of fresh water timber, we may be disposed to inquire why our produce cannot as well be borne to the ocean by ocean craft, as well as in unsafe and perishable arks.

The English dock yards are, to a great extent, supplied from the forests of the St. Lawrence and its tributaries, and from points far above tide water.* The seaboard of France is nearly denuded of oak, and she draws her supplies far from the interior. The Russian navy may be said to be built entirely of fresh water timber. The Memel oak, probably the best in the world, can hardly be affected by any ocean peculiarity, as the water high up the Baltic contains less than one part in a thousand of saline substances, and is so pure as to be used by the sailors. The ship-yards of our seaboard, north of the Chesapeake, are now supplied by forests on the streams in the interior; and, in New England, land ten and twenty miles from tide water, and well covered with oak, will sell from one to five hundred dollars per acre. A single fresh water oak tree will often sell for one hundred dollars to the shipwright. The oak on the Indiana coal field is of a very superior quality; it has been of slow growth; it has on the hills been exposed to the sun, and its roots have been forced to spread near the surface, and thus affords the best "knees and arms." These peculiarities are well understood by all who have examined the subject. The ship "Minesota," built at Cincinnati, and sent to sea last spring, is pronounced by the most competent judges equal to any ship afloat, in the quality of her materials.

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* British America furnishes three-fourths of the timber imported into Great Britain. See tables in McCulloch's Com. Dict

Indiana millwrights can furnish two inch oak plank at ten dollars per thousand, while its price in the eastern ship-yards ranges from thirty-five to sixty dollars per thousand. Pine masts can be floated from the Alleghany, Kanawha and Cumberland rivers, at half their eastern prices. Other timber, such as black locust for ribs, poplar and chestnut for keels, black-walnut for ornamental work, can be had at vastly less than eastern rates. We have the soft iron ore for fastenings, anchors and cabels; hemp for cordage; cheap food for the builders and riggers; and then we have downward and outward freight for any port where the best market for ship and cargo can be found. As high as the falls of the Ohio and the falls of the Wabash and White rivers, ships of four hundred tons, and drawing, when fully laden, seventeen feet, can be towed to sea one hundred days in the year, and at the very time when the flatboatmen are guarding against the dangers of snags, sawyers and winds, which could not harm the vessel.

I dwell tho longer on this subject because I regard this business as one of very great importance to our agriculturists who are now subjected to high freights and insurances—who are delayed in getting their produce to an uncertain market—and who are yearly subjected, at New Orleans, to high charges and to the tosses attending the exposure of perishable articles on the levee of that city during the time occupied in effecting sales and making reshipments. All that is wanted to bring the ship builders to us is to inform them of the quality of our materials, the conveniences where these materials abound, the capacity of our streams, and the abundance of our freights.

Bring the ship builders, and the speculators in produce from New York and New Orleans will come here and buy and ship our produce; we shall receive the money at home, and not be compelled to risk foreign markets and foreign agents.

This business requires but a moderate capital, and it would afford immediate relief. Had it been introduced ten years ago the farmers in the Wabash valley would have since saved, on their shipments of produce, enough to have constructed their railroads from Terre Haute, Lafayette and Vincennes, to their eastern termini in the State.

There are very many other articles of which wood is the chief material, and, in the aggregate, costing a large amount of money, which should be made at home, and are now imported from most unnatural sources. For instance, pails and tubs; almost every steamboat which touches at the southern parts of Indiana brings nests of these articles made in the interior of New England.

Black-walnut is now cut on the banks of our rivers, floated to New Orleans, shipped to Boston, sawed into veneers, and often brought back to us as the covering of bulky and fragile furniture. The tree which leaves us at a price of a few hours labor, comes back at the cost of five hundred days labor.

In the productions of the forest, then, we have incalculable advantages over England and Belgium. The materials are much more convenient for combination with the power.

The same remark is true of our minerals, of which iron is the most important.

Of the iron stone, and argillaceous iron ore, we have inexhaustible quantities in the south-western counties, and bog-iron ore as is said in the north-western counties of the State—none of this is regarded as valuable unless it is at least equal to the best English ore—while much of ours will yield double the per centage of that of England and Belgium.

Iron stone in South Wales is now raised with the coal 1800 feet, and the coal must be coked before it will smelt the ore. By improved modern processes our ore, found on the surface, can be smelted by the coal itself. In the production of iron the wages of labor could not be lowered to English rates, simply because the miner and iron worker here can produce two or three times the quantity that their competitors in Wales or Northumberland could produce.

Indiana now sends abroad her bulky and perishable corn and meat, which can be produced equally cheap by the ignorant Russian serf, to the extent of over one million of dollars a year in exchange for coarse fabrics of iron—such as axes, scythes, spades and hoes, which are made of ore, and by coal far inferior to her own; and the loss on the carriage both ways is a self-imposed tax on her labor and capital. She not only sends the tree to New England, but she sends a thousand miles for the axe to cut down the tree, and across the ocean for the chain to drag the tree to the river. She is a producer and consumer, and, as such, pays the freights and loses the profits.

Of potter's clay she has enough of all the ordinary qualities to supply the world, and yet she sends to Staffordshire for her common plates, pays a duty of 33 per cent., a freight of over 50 per cent., and an extra profit corresponding with the distance of over 20 per cent., on an article, which, considering the price of food and the difference in taxes, can be made cheaper on the White river than in Staffordshire.

There is now a new born town on the upper Ohio, called Liverpool, where coarse potter's ware is now made, and sold at half the cost of the imported article; and this is now forcing its way into common use, despite the opposition of dealers in such goods; who, like other merchants, make the highest profits on the most costly and distant-made fabrics. The further the source of supply, the less chance has the consumer of detecting imposition.

By the way, this traffic in goods is a curious study. Our retail merchant is familiar with the cost of staple goods made near home; by the prices of these he judges of the fairness of the wholesale dealer; these staples are often put at cost by the jobber, to obtain the favorable opinion of his customers. Where, then, are the profits of the New York and Philadelphia jobbers? They must live and make enough to pay enormous rents. Why, on slazy calicoes, made in England; on German trinkets; on French silks so very changeable that the tint of the rose on them will last but a summer's morning—with these distant made fabrics our retail merchant and his customers are semi-annually imposed on; and so will ever be while our policy is to consume what we do not produce, and to produce what we do not consume.

Another of our great staples is wool. Now, our bags of wool, and imported bales of woolen cloths and carpets, are meeting and crossing each other on routes of a thousand miles, connecting us with eastern mills, operated by power more than five times as expensive as our own. Here again we are producers and consumers, and pay the freights and lose the profits.

The price of wool here, in its various grades of preparation, will average, perhaps, not over fifteen cents a pound, and when it reaches the eastern mill will average twenty-five cents; it is spun and woven into carpets, for instance, and becomes worth eighty cents; on its return to us it has advanced to one dollar. Here distance has added ten cents to the value of the material which has been combined with seventy-five cents of foreign labor.

For the yard of carpet we pay first the one and a half pounds of wool, at twenty-two and a half cents; to make up the seventy-seven and a half cents we send to the carder, spinner and weaver of the carpet factory, a bushel and a half of wheat, or five bushels of corn, they paying the carriage.

Now, on good land, an industrious man will produce an average of two and two-thirds bushels of corn a day, and wheat is the proportion of one and a half to five. For this yard of carpet, then, we exchange nearly two days' labor and one and a half pounds of wool. The actual capital employed to produce the former is actually less than that required to produce the latter. The carpet weaver has spent no more time at the power loom in learning the trade than our farmer's daughters have at the house loom; her labor is not as severe, and the quantity of labor employed by the girl in the fabrication of the yard of cloth is not one-half that employed by the man in the production of the five bushels of corn. Our wool, in the eastern market, is in competition with the wool of South Amerca, and our wool-growers are competing with the wool-grower of South America, who pays nothing for land or pasturage, and has to support neither preacher nor teacher. He can produce as much wool without as we can with the schoolmaster; but he has neither the power nor the skill to make cloth. We can combine a single pound of wool with the power, skill, food, wood and iron, and send the yard of cloth to Brazil, and bring back in exchange for it, fifteen pounds of wool, and enough coffee to pay all the expenses.

The southern section of Indiana is admirably adapted to the cultivation of hemp. That which is now grown is put chiefly into coarse bagging and rope, because we cannot send it to the seaports of the world, where are the manufactories of cordage and sails. The Russian slaves will forever keep it out of the markets of Glasgow and Liverpool, and generally will undersell us in New York. But the Russian slaves are too ignorant to make "duck" and cordage, and they have no available power. If we will put up the proper machinery, we can rig our ships at home and export sail cloth to Riga and St. Petersburg.

Room will not admit of the enumeration of very many other productions of the State which should, and eventually must, be manufactured within its limits. I pass to the consideration of a staple, which, in its rude and perfect forms, now nearly controls the commerce, the exchanges, and the policy of the commercial world. The field of production of this staple extends to within a few hundred miles of our inexhaustible power and well supplied granaries. The coal of Great Britain and Belgium and the water power of NewEngland has attracted the cotton of the South, from three to seven thousand miles, and the consumers of cotton goods have, not only paid the expense of its removal, but also freights on distant shipments of subsistence, the commissions of numerous factors, the dividends on costly roads, and the taxes of expensive governments. The food producers of the upper, and the cotton producers of the lower, sections of this valley are depressed, because the product of their joint labors is combined at such a cost in distant workshops; because it has to support too many carriers, too many roads, too many navies and armies. On investigation, these producers are just beginning to find that capital and skill are easily transported, and that our home power is vastly more convenient and less costly than that to which we have so long been tributary. Further investigation will show to the producers, the propriety and profitableness of associating their own materials, capital and labor, in such proportion and at such positions as will render the joint product so cheap, that a demand commensurate with its supply will arise, and afford satisfactory profits and wages to all who have been employed in its combination.

Indiana now offers the very best positions for effecting this combination; where the aggregate values of power, materials, subsistence and transportation, are the lowest known; where health is secure, and social wants can be fully supplied. When Kentucky has become emancipated from her slaves, she will offer a few positions equal to ours, but she now lacks a most attractive element to productive labor.

Illinois has nearly 44,000 square miles of power, but nearly all the points at which her coal rises above the plane of high water, and where it is very accessible, are now unhealthy.

There are obvious reasons why the cotton planters on the Lower Mississippi cannot profitably work up their staple at home. The reasons are almost equally obvious why they should manufacture in Indiana, if they are encouraged so to do, and shown that they can do so with profit. But, perhaps there is not one cotton planter in a hundred, who is aware that Indiana has the cheap power; and the ninety-nine yet see no chance of avoiding the expensive transportation of their staple to expensive workshops. These planters are now receiving less than four per cent. on the estimated value—and, indeed, actual amount of their capital. Our farmers are not making as large a per centage on their investments. The English spinner is in distress and poverty, and his employer is in failing circumstances; the carriers say that their business is unprofitable, and the shipwright is begging for employment. Is not the reason of all this obvious? The cost of transportation is absorbing the profits of capital and the wages of labor.

To extend the consumption of cotton cloth, we must diminish its cost. This can be done by lessening the amount and cost of trasportation. Then its joint producers can grow rich. The cotton crop is, say, 2,200,000 bales; over 1,000,000 of these bales are required for coarse fabrics. 1,000,000 spindles and corresponding machinery will make these coarse fabrics. This machinery can be set in motion for $75,000,000.

Were these fabrics made in Indiana, and at the most convenient positions, the savings in carriage of cotton cloth, food, &c., to say nothing of taxes, would exceed *twenty millions* of dollars a year. The incidental advantages to the West, attending such a change, would be expressed by a sum vastly larger. This would be the result of our manufacturing only the coarser, least expensive and least profitable goods, and the result is susceptible of proof in which there can be no uncertainty. Indiana could spare all the labor, and the South and the West could now easily furnish the capital, even if that capital was money. But if we made the machine shops and furnaces, and the rolling mills, the money we should need would be merely the amount required to import our tools and patterns; the remainder would be but the representative of labor, and the product would be the investment made by labor.

Let us review the comparison between the relative power of Indiana, England and Belgium, and take in that of New England.

The most important coal field of Belgium commences in the province of Namur, traverses Liege, and extends to the center of Rhenish Prussia; including the portion which passes by Valenciennies to Douai, in France; its whole length is about 150 miles.

The coal fields of England and which lie under her chief manufacturing district, commence near Worcester, north of the Bristol Channel, and extend north about 150 miles.

The water power of New England worthy of notice, is at perhaps 150 different positions, and they all may represent a line of 150 square miles of power equal to those of Indiana.

The power of England and Belgium is at the mouths of pits along its lines, and used at the positions where mills and tenements can conveniently be erected. The power of New England must be used precisely where it is found, and irrespective of the cost of access to it.

The power of each is in a country naturally barren, and the most expensive instruments are required to make it available; its first cost is in money at least four times that of ours; measured by labor, the difference is much greater.

The surface of the countries, and the respective advantages in this respect, may be measured by the cost of railways in each. In Belgium, their cost of construction has averaged over $35,000 per mile. The English manufacturing district is connected by roads at an average cost of over $150,000 per mile, and receives its materials, and sends its products over roads of a still higher cost. That from Manchester, for instance, has cost about $170,000 per mile. In New England, the railroads which connect her power with raw materials and markets, have cost over $50,000 per mile.

The roads which may be required to connect the power of Indiana with the Ohio, the lakes and the markets afforded by the State, will not average over $15,000 per mile, and, from the cheapness of fuel, the low grades and the straight routes over which they will pass, they will be operated with much less expense, and with a greater saving of time than those in the other districts referred to.

In England, Belgium and Indiana, the coal fields present nearly equivalent geological formations, and almost every mineral earth and stone, specially useful to the manufacturer, can be found on each formation. In the two former, the coal, stone, iron and earth, are deeply buried in the bowels of the earth; in the latter, they meet the hand of the traveler on the surface. New England has very few of these auxiliaries to her power. She has been enabled to compete with her rivals, by exemption from government exactions, and by comparative nearness to certain materials and markets.

Indiana, like the other districts, has also a line of power. This line extends from the Ohio in Perry county, to Perryville in Vermillion county, or about 150 miles. There is probably another line through Spencer, Warrick, Pike, Knox and Sullivan, but as this has not yet been clearly defined, we limit this review to that section of the lower stratum of coal and above the plane of high water. This will average about four miles in width, and give an area of 600 square miles of power. In most of these square miles there is an average of 50.000,000 bushels of coal, at least, and if we allow an average of four and a half feet thickness to the stratum, over 125,000,000 bushels. The smaller quantity will give an amount of power, for hundreds of years, equal to the average of the 150 places of water power in New England.

The coal and auxiliary minerals of Belgium have concentrated population, created immense wealth, constructed railroads, drained morasses, leveled hills, made barren wastes fertile, and while all this has been done, the people have paid high prices for food (so high that farming land often brings $300 per acre), and enormous expenses of government.

The same materials have given Central England wealth beyond computation, and an influence that affects the world.

Power alone, of another character, and of a more costly kind, has made sterile New England the garden of America. One of its results is the construction, in one State alone, and within fifteen years, of 700 miles of railroad, at a cost of $35,000,000. Another exhibition of its value is found in the investments made by that single State within two years and a half, and in stocks and public works, of over $50,000,000.

Now, is there any possible reason why like causes here should not produce like results. If our power is cheaper, our ores more pure, our food more abundant, our taxes lighter, our instruments of labor more convenient and less expensive than in those other countries, are we not reasonably to expect developments and progress, corresponding to such advantages? and are we not imperiously called on by our own interests to ascertain the full extent of these sources of wealth and independence?

When we shall have sent men of high scientific acquirements, to explore our hills and plains, to analyze our ores, to examine our forests and mines, and have their full reports, we can safely challenge the world to show 23,000,000 of acres in one body, capable of sustaining and employing as large a population as can those of Indiana.

In truth, compare fact with fact, advantage with advantage, and there cannot be found, the sun does not shine upon, 36,000 contiguous square miles of hill and dale, so highly favored by nature, and which contains so many physical elements of prosperity as those within the limits of Indiana.

ART. VI.—THE NORTH AND THE SOUTH.

SUPERIOR PRODUCTIVENESS OF AGRICULTURE—EVILS OF GREAT CITIES.*

I THINK now that if anything can be shown by facts, I have demonstrated the superior wealth of the people of the South over those of the North in proportion to their respective numbers; and this, by comparing the less prosperous of the South with the most flourishing of the North. And, I think I have shown the South to be the most fortunate in the distribution or equalization of wealth as well as in its acquisition. At all events, I have rescued the controversy between the two sections, from the control of bold assertion and slipshod declamation, and confided it to the umpirage of argument and document.

There are some who sneer at statistics, and assert that anything can be proved by them. But such expressions, I think are peculiar to those who deal in assertion chiefly, and find it unpleasant to be answered with facts. For statistics are nothing but collections of facts. I admit that facts themselves may be powerless or pernicious to a mind not logical nor philosophical enough to comprehend and classify them. But in relation to the affairs of this world at least, I ask with the English philosophic poet:

> "What can we reason, but from what we *know*."

Facts constitute the great restraint on the imposition of interests, the dogmatism of fanatics and bigots, the fallacies of the vulgar, the prejudices of the sectional, and the dreams of enthusiasts. Facts are the tests of systems, the landmarks of progress, the harvest of time, the elemental particles of truth.

But it is peculiarly important to resort to statistics on this question, because they are so much employed and perverted on the other side. From the speech of the senator to the column of the editor we are continually assailed with statistical comparisons between the North and South derogatory to the latter. In 1839 Daniel Webster presented in a speech to the Senate in praise of Massachusetts, an official statement of her annual products, which amounted to nearly $100,000,000, which he characterized as the yearly fruit of her industry and capital. This would strike every mind as evidence of great productiveness and profit in a State of her population; since the annual product of Virginia, is only about seventy millions. But on scrutinizing the Massachusetts statement, it is found that Webster included, as the product of her industry, the raw material employed in her manufactures obtained from other States; the raw cotton, the wool, the raw hides, the dye stuffs, &c., &c.

It is but the other day that we had an extract from the report of the Commissioner of Patents, published in all the papers, which undertook to give us an estimate of the wealth of the respective States. On examination, it is found to assume population as the basis of wealth. An average is made of the wealth of each man in a few States, and that is multiplied by the number of men in each State. By this rule, Indiana, which is more populous than Massachusetts, has more wealth—and the

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* Continued from August number.

North, of course, greatly more than the South. The Commissioner of Patents is a northern man; and travels deliberately out of the sphere of his duties to make up and send forth this absurd table—and in thus undertaking officially and officiously to enlighten the ignorance of the people, displays his own.*

But whilst I contend that statistical evidence may be sufficient to convince, I am aware that it is not enough to satisfy, the mind, particularly when at variance with prevalent opinions. It is a legitimate and laudable desire, even after knowing that a thing is so, to know why it is so. And I acknowledge it is incumbent on whoever attempts to overthrow a popular error to show not only that it is such, but that it must be such, on the recognized principles of human judgment.

The reason, then, I conceive, for the great pecuniary prosperity of the South, is that she is so generally agricultural. About one-half the population of the old northern States resides in towns or cities—in the southern about one-tenth.

Even Ohio, a new State, with greater agricultural attractions naturally than any other, has already a town and city population estimated at one-fourth of the whole; the single city of Cincinnati, only fifty years of age, containing more people than ten of the largest towns of Virginia, the oldest State of the Union.

But why is agriculture more profitable than manufactures or commerce? One reason is, that agriculture is more productive or multiplying than them: that its products are the principal and the indispensable articles of human subsistence, and are obtained with less of human labor and skill, than the others. The fecundity of nature can never be rivalled by art. A grain of wheat when sown will produce an hundred fold, but no fabric of the loom, no cargo of the ship, can have its value augmented in the same proportion, without the co-operation of a much greater proportion of labor and skill. Commerce and manufacture are chiefly artificial; agriculture is for the most part the work of nature. It is true that the facility with which articles are produced from the soil, influences materially their value in market, and that the prices of different kinds of labor tend to equality; and it is true also, that prices of commodities are affected by the relations of supply and demand. Hence there is no such difference between the profits of the farmer and the artizan, or merchant, as the relative productiveness of their labors would indicate. But the interchange of commodities between the two classes, is by no means equal, nor is it obedient to those laws of trade. The farmer holds the subsistence, and consequently the property, of his civilized fellow men in his power; and this power he will exercise when circumstances permit, according to the sentiments which the possession of power inspires; according to the prejudices of his class, to the appetite of monopoly—and not according to the wages of labor, and the law of supply and demand. The monopoly of the necessaries of life which agriculture confers, has produced some of the most striking social and political revolutions in history. It enabled Jacob to extort from Esau, who was a hunter, his birthright for a mess of pottage. But Jacob himself and his family preferred the lighter labors of shepherd life to tillage, and hence from a scarcity of corn, became dependant on the granaries of Egypt, and fell into bondage. In wars between agricultural and commercial nations, the former have generally conquered. Athens was overcome by Sparta—Greece by Macedon—Carthage by Rome—events which indicate the superior resources of the conquerors more than their bravery. In England—whose commerce has been enriched by the monopoly of the trade of colonies in every clime, and whose manufactures have been expanded by the stupendous inventions of genius—agriculture still maintains pre-eminence in wealth and political power, although it comprehends only about one-third of the population. The agriculture of the South produces a greater variety and abundance of the staple articles of human comfort and subsistence than that of any other region. Besides such breadstuffs and provisions as the North affords, the South has, by the superior genius and energy of her people, acquired almost a monopoly of the cotton culture. The South thus controls an extraordinary proportion of that food and clothing which the world consumes, and hence makes a corresponding progress in wealth.

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* We do not admit the justice of the reflection upon Mr. Burke. He was altogether without sectional prejudices—or if he had any, leaned rather to the South.—EDITOR.

Whilst agricultural life is so much more productive than other avocations, it is vastly less expensive or consuming. Almost all other pursuits resort to towns and cities, where the style of living is costly and extravagant. It is very rare to find farmers or planters residing in palaces of marble or granite. It is seldom that even public buildings in the country are constructed of such materials. But in cities they are not unusual in private dwellings with those who have the means—whilst the great number of public buildings, churches, banks, offices, &c., are of corresponding magnificence. The style of building affords a fair criterion of the other elements of expense in city life, diet, clothing and amusements. It is well known that in the larger cities, the expenditure of the wealthy class of families amounts to some eight or ten thousand dollars a year. Now, among the planters of the South of equal wealth, in the country, it would be hard to find a mere domestic expenditure of such an amount; perhaps rarely more than half of it. In the country the inducement to build such habitations is not so great. There are not so many to admire and to praise in a rural neighborhood as throng the streets and avenues of a large city. Nor is there to be found in the country the over-grown millionaire to set the example, and to fire the pride and vanity of his poorer neighbors, their wives and daughters, with a desire to emulate and imitate.

In a city the temptation to indulgence is incessant, because almost every object of desire is in market, and desire itself is inflamed not only by opportunity but by rivalry.

It is this great display of wealth and luxury in cities, which has caused the popular error that they are the peculiar abodes of wealth and prosperity; and that the States where they abound, are more flourishing than others. The world is a great believer in appearances. But it is curious that the very circumstances which have given to the cities a character for riches, should be the causes of that poverty, whose actual existence has been proven. For the practice of extravagance is not confined to the rich, but extends to every class of city life. For in every class there are rivals struggling with each other to make the best appearance, and the distinctions of class are so indistinct as to make each one ambitious of equalling its immediate superior. In a word, the dominion of fashion is far more despotic and oppressive in city, than in country life. Even the poor sempstress, who bends over her work during the tedious hours of the day, and far into the night, to earn a meagre subsistence, until dimness gathers in her eye, and distortion fastens on her form, even she pays from her scanty earnings the tribute exacted by fashion, and arrays herself in a costume as conformable to the prevailing mode, as her means can make it. But in the country, where people do not live under each other's observation and criticism continually, it is otherwise. It is only when visiting or visited that the occasion of display occurs—and the annual expenditure is regulated accordingly. It is true that the average wealth of the inhabitants of cities is generally greater than that of the rest of the people in the State, and almost equals that of prosperous agricultural States. But this wealth is not the product of city employments. It results from the influx into the city of persons who have become rich in the country, and who resort to the cities, because they cannot carry on agricultural operations extensively in the country, in free States. This results from the high price of agricultural labor in the free States, and its irregularity. An industrious laborer on a farm, soon acquires enough money to buy a small tract of public land, and emigrates to it. Hence a farmer who acquires some wealth in these States, and finds it difficult to extend his operations in the country, resorts to commercial operations, and settles in town. Even those who would prefer remaining in the country, and yet desire to enjoy their fortunes in social intercourse, find it difficult to spend their leisure pleasantly in the neighborhood, from the want of associates of equal means—the great mass being the occupants of small farms, without servants, and therefore lack the means of performing the rites of hospitality, without a derangement of their domestic systems. The want, then, of society in the country, the opportunity of investing largely in towns, the chances of acquiring great fortunes by speculation, and the facilities for gratifying our various appetites which wealth affords in cities, all conspire to divert the wealth of the country to the town, in free States. Even in Boston for instance, it appears by a recent enumeration that nearly two-thirds of the inhabitants were not born in the city: nearly one-half are natives of the Union, most of them of course from Massachusetts, and the other New England States. In fact, not quite one-tenth of the people of Boston, over twenty years of age were born there. The total population of Boston in 1825, was 43,298, and in 1845, the native population instead of being double was but 41,076. So that there has been no natural increase of the population of Boston in 20 years. These facts afford striking evidence, not only of the sources of Boston wealth, but of the rapidity with which it is wasted on its arrival. Besides the extravagant and speculative habits of cities, which waste their resources, we must add the enormous taxation to which they are subject. The city of New York with its four hundred thousand people, is taxed for the present year, about three millions of dollars, a sum which is about half as much as the taxes of all the fifteen southern States combined.

But the most disastrous and appalling consequences of city avocations, is the waste of human life. In the city of New York, the deaths last year exceeded 14,000, or one person out of every twenty-eight; and it was a year of no uncommon mortality for that place. The great mortality of the eastern cities is supposed to belong chiefly to the emigrant population But this is not the case. In 1836, when the deaths were 8,009 in New York, only a little over one-fourth were foreign; and that must have been about the proportion of that population. In 1847 the deaths in the city of New York, were 15,788, of whom only 5,412 were foreigners, although the mortality of that year was increased by the ship fever, which was very fatal to emigrants. The deaths week before last were 206, of which 108, or more than one-third, were foreign, and the proportion of that population is now much more than one-third. The mortality of New York is much greater than it seems; because, being so largely emigrant from the interior and from abroad, the proportion of adults in her population is much greater than ordinary, and among adults, mortality is not near so great as among children. New York has 50,000 children less than her share.

In the last twenty years the population of New York has nearly doubled, but its mortality has nearly trebled.

According to an official statement[*] of the duration of human life in the several avocations in Massachusetts in 1847, it appears that the average of

Agriculturists is,	64.14	years.
Merchants,	49.20	"
Mechanics,	46.45	"
Laborers,	46.73	"

This is the average life-time in the several occupations beginning at twenty years. According to this, the three avocations of city life, merchants, mechanics and laborers, average about 46½ years, whilst farmers live more than 64½ years, or one-third longer. This enormous, and I had almost said, atrocious destruction of human life, which is continually going on in towns and cities, is enough of itself to account for the superior progress of agriculture in wealth. The loss of so large a proportion of time, in adult years, the expenses of sickness, and the derangement of business, make an aggregate of itself enough to sink any reasonable rate of profit or accumulation in any pursuit. And hence it is, that the South, which is so much exempt from the corrosive action of cities on property and population, has made such rapid progress in wealth.

Thus then the superior productiveness of agricultural labor, the great intrinsic value as articles of necessity, of its products, the extravagant style of living in towns and cities, and finally, the ruinous waste of human life and labor they occasion, are reasons enough to account for the fact previously demonstrated, of the triumph of the agricultural States of the South over the more commercial States of the North.

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[*] American Almanac, 1849.

INTERNAL IMPROVEMENTS AT THE SOUTH.

1. MOBILE AND OHIO RAILROAD.*

WHILE the cities of the North and East are stretching their "iron arms" toward the Mississippi—and New York, Boston, Philadelphia and Baltimore, are struggling in mighty rivalry with each other, which shall *first* grasp and appropriate the treasures of that vast region—Charleston is silently pushing *her* claim, and completing, step by step, the grand highway, which is to bear to her port the riches of the great South-west. Already she has advanced to the borders of Alabama; and, that nothing may be lost, tributary branches ere thrown northward into the fine agricultural districts of Tennessee, eventually to be extended to Nashville and Memphis; while the main trunk, after traversing the heart of Alabama, will pass through the capital of Mississippi, and meet the "Father of Waters" at Vicksburgh.

That this extended system of railway, when completed, will increase the commercial importance of Charleston in an eminent degree, requires no discussion; and it is equally plain, that the interests of New Orleans and Mobile—the two commercial cities of the Gulf, and natural points of shipment for the produce of the great valley—will be materially affected by the opening of this new and rapid channel of communication with the seaboard. Even now, the direction of trade is shaping to meet the new condition; and we find, during the present season, that "Alabama cottons" are for the first time regularly chronicled among the arrivals by railway into Charleston and Savannah. Returning, North Alabama and East Mississippi receive merchandise by the overland route from Charleston, and transport it from the present railroad terminus, many miles, by wagons; often to points immediately upon the waters emptying into Mobile Bay, which are navigable by steamboats for several months of the year. And this is but the beginning. The laws of the Medes and Persians were not more inflexible than are the laws which govern trade. Individual preferences, or State pride, avail nothing. The merchant who waits for the uncertain winds of heaven to waft his freighted barque to her destined port, cannot compete in the race with him who employs omnipotent steam to transport his commodities into a harbor where he finds the "iron horse" waiting, ready harnessed, to draw them with lightning speed to his very door.

Alabama, hitherto prolific in *schemes* of internal improvement, has accomplished nothing, save only a few miles of railroad from Montgomery eastward—a link in the great chain before mentioned, which is to drain her of her wealth, to enrich and build up cities in more enterprising and sagacious States. Superior to many, and second to none, of her southern sisters in the natural elements of greatness, Alabama still languishes, and her people groan under the burdens of public debt and prospective taxation, while her resources remain undeveloped, and her principle city and only seaport is fast going to decay!

Such is the present position of this great State; but we have assurance that a brighter day is about to dawn, and that Alabama, stimulated by the example of her eastern neighbors (and in spite of the short-sighted and illiberal policy of her State rulers), is shaking off the unaccountable lethargy which has so long overpowered her, blighting like a mildew and eating into the very sources of her vitality, and will soon enter upon a new and more brilliant era of her history. With a soil of surpassing fertility—with mineral treasures of incalculable value, scattered in varied and lavish profusion throughout her territory, she only requires a vigorous and well directed system of internal improvements to render them accessible, and place her at once in the front rank of wealthy and powerful States. The first and most important step in this system, may well be characterized the great undertaking to connect the Gulf of Mexico with the Ohio and Upper Mississipi valleys, by means of the Mobile and Ohio Railroad.

The Gulf of Mexico, from causes rapidly developing, is destined, ere long, to become the theater of a new and extended commerce. The application of steam to ocean navigation, while it has given a wonderful impetus to the commerce of the world, has also awakened a restless spirit of enterprise, that will not much longer brook the delay and hazard of a tedious voyage round Cape Horn to reach the Pacific, when a channel at once safe and accessible can be created, which will cut off half the distance at a blow. The growing importance of our possessions in Oregon, and the large territory acquired by the Mexican war, will make it imperative upon our government to establish, without delay, some more safe and expeditious route of communication with that country; and we have good reasons for believing that the subject is receiving, at this time, the attention at their hands which its high importance demands. That a few years, at furthest, will witness the completion of an unbroken avenue from ocean to ocean, either across the Isthmus of Tehuantepec, or some more favorable point, cannot, we think, admit of reasonable doubt.

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* By Francis B. Clark. Mr Clark has kindly favored us with a copy of his admirable paper in pamphlet form. We shall publish it in parts in our Review. Having appeared originally in Hunt's Magazine, it must necessarily have had a limited circulation in the South. This evil we amend.

The cities of New York and Boston, from their natural location, their capacious and excellent harbors, and healthy climate, occupied positions eminently favorable for becoming, at an early period, the great receiving and distributing reservoirs of the nation. With the advance of emigration westward, it became necessary to construct new facilities for reaching the seaboard; and the great pioneer of American improvement—the Erie canal—was extended from the Hudson, through the then wilderness of western New York, to the blue waters of Erie, thus opening to the trade of New York a territory stretching over two thousand miles inland, with an uninterrupted water communication throughout its whole extent. As if by magic, the wilderness disappeared, villages and towns sprung up, and the solitudes of yesterday were peopled with an active and industrious population. New York, stimulated by the commerce of the canal, leaped forth like a young giant, and soon left her competitors and rivals hopelessly in the distance. How can we estimate the tremendous influence which the Erie Canal has exerted upon the growth, not of New York alone, but of that vast territory which borders upon the Lakes? The *rapidity* of this growth may be conjectured, however, by comparing the revenues from the tolls on this canal and tributaries for the years 1826, 1836 and 1846, being intervals of ten years:

Receipts for tolls on	New York	canals	in	1826,	in round	numbers,		$762,000
"	"	"	"	1836,	"	"		1,614,000
"	"	"	"	1846,	"	"		2,764,000

Or an average increase of nearly eight per cent. per annum. It must be remembered, also, that the rates of toll have been much reduced, and the same amount of revenue in 1846, would represent a far greater product than in 1826, and would make the average, therefore, higher than the figures.

The moment that a highway is completed to the Pacific, the superior advantages which these Atlantic cities afford for supplying the great valley with foreign merchandise, will cease forever. We need not enter into argument to prove that the route of which we have spoken must then, of necessity, become the grand thoroughfare for the commerce of the world. It has been done by abler pens than ours. Need we know more than the fact that the ports of the Gulf will be brought, by its consummation, into immediate vicinity with the boundless treasures of the Pacific—that it will be the nearest route from Europe to the East Indies? The cities of the Gulf must then become the "half-way houses" for all foreign traders with the East, and upon the shores of this "Western Mediterranean" must rise the future commercial capital of America, if not of the world! Mobile, as we shall endeavor to show, possesses striking advantages over any other point on the Gulf for becoming the chief emporium of this commerce.

Upon inspecting a map of the Gulf of Mexico, we discover five considerable ports upon its northern coast, within the limits of the United States, to wit: Galveston, New Orleans, Mobile, Pensacola, and Apalachicola. The depth of the water upon the bars, which obstruct the entrance to these harbors, is as follows:

Galveston,................ feet,	...	Pensacola,.....................	22
New Orleans (mouth of Mississippi)	15	Apalachicola,..................	16
Mobile (by recent survey), ...	20¼		

The last named, from its easterly position, can never become more than a depot for the produce of a limited district; as whatever may be its advantages otherwise, the system of railways leading to Savannah will effectually cut off all trade from the interior above a certain point

Pensacola, with a fine harbor, and, at present, a greater depth of water than any other on the coast, occupies an isolated position. Without means of intercourse with the upper country, she can never become the seat of extensive trade. Efforts have been made to connect with Montgomery and Savannah by railroad, but without success; and it is not probable that it will be attempted hereafter, should the Mobile and Ohio Railroad be completed.

Galveston is well situated to command a flourishing trade with the interior of Texas, but, like the two ports above named, must always be tributary to the more favored cities of the Gulf.

It remains, then, for us to consider the ports of New Orleans and Mobile, and compare their relative advantages. The growth of New Orleans is the result of the necessities of commerce. Twenty thousand miles of navigable waters converge, and flow by a single outlet to the sea, draining a territory unequalled for fertility upon the surface of the globe. The surplus products of this vast region could reach a market by no other route, and a shipping port was, of course, inevitable. The most formidable obstacles ever encountered by human energy were overcome, and a city has risen from a pestilential swamp, second only in its commerce to New York. Notwithstanding the rapid increase of New Orleans, and her immense trade, she does not concentrate the wealth or population to which her position as the seaport of the Mississippi valley entitles her. The reason is obvious. The difficulties in the way of her growth are permanent in their nature. Circumscribed between narrow limits, with the river upon one side, and impassable marshes upon the other, every step in her progress is at immense cost. During the warm season a deadly miasma exhales from these marshes, by which thousands of her population are annually destroyed. Being more than a hundred miles from the ocean, vessels reach her wharves at a heavy expense for towage up the powerful current of the Mississippi. The bars at the mouth of that river do not permit ships of large tonnage to enter her harbor. From all this it is evident that the trade of New Orleans must be taxed with heavy expenses. Since the northern cities have tapped the Ohio valley, a large trade has been diverted in that direction in all articles of value sufficient to pay the enhanced cost of transportation by land. Thus, while New Orleans exports a large share of the products of the West, New York imports and distributes most of the foreign merchandise to the same region at a fine profit. Every additional line of improvement constructed in the West, reduces the cost of transportation to and from the eastern cities, and consequently increases the tendency of trade in that direction. Nevertheless, were it possible to make New Orleans a healthy city, with a dry soil on which to build, she would soon outstrip New York, and become and continue the first, as she is now the second, commercial city of the American continent.

Let us examine the situation of Mobile. Built upon a dry, sandy plain, at an elevation of fifteen feet above tide-water, this city answers the conditions in that respect which Wm. Penn required of his commissioners, when about to found the city of Philadelphia: "yt the scituation be high, at least dry and sound, and not swampy, wch is best knowne by digging up two or three earths, and seeing the bottom." The location is healthy, and the summer heat is tempered by refreshing breezes from the Gulf. The country in its vicinity is undulating, and abundantly watered with excellent springs. Pure and wholesome water is brought in pipes from a distance of four or five miles, sufficient to supply the wants of the city. Spring Hill, six miles distant, and various elevated points less remote, offer convenient and charming rural retreats, where the climate is as salubrious as in any section of the Union. Immediately below, Mobile River expands into a beautiful bay, affording secure anchorage for the largest fleets. The labors of the United States Coast Survey, now in progress, have been rewarded by the valuable discovery that the water on the outer bar, at the entrance to Mobile Bay, is gradually deepening, and will now float over vessels drawing twenty-one feet at mean low water.

[*To be continued.*]

PROGRESS OF THE SOUTHERN STATES.

1. SLAVE AND FREE NEGRO LAWS OF SOUTHERN STATES.

[SOUTH CAROLINA.—We publish another part of Judge O'Neall's address, without, however, having received permission to do so. If the permission be not given by the holder of copyright, we shall endeavor to get some other gentleman of the Carolina bar to finish the subject. We again ask for similar papers from other southern States.]

Sec. 22. Under the act of 1740, 1st section, 1st proviso, and the act of 1799, it is provided if any negro, mulatto or mestizo, shall claim his or her freedom, he may, on application to the clerk of the court of common pleas of the district, have a guardian appointed, who is authorized to bring an action of trespass, in the nature of ravishment of ward, against any person claiming property in said negro, mulatto or mestizo, or having possession of the same; in which action the general issue may be pleaded or the special circumstances given in evidence, and upon a general or special verdict found, judgment shall be given according to the very right of the case, without any regard to defects in the proceeding, in form or substance. In such case, if the verdict be that the ward of the plaintiff is free, a special entry shall be made declaring him to be free—and the jury is authorized to assess damages which the plaintiff's ward may have sustained, and the court is directed to give judgment, and award execution for the damages and cost; but if judgment is given for the defendant, then the court is authorized to inflict corporal punishment on the ward of the plaintiff, not extending to life or limb. Under the second section of the act of 1740, it is provided that the defendant in such action, shall enter into a recognizance with one or more sufficient sureties to the plaintiff, in such sum as the court of common pleas may direct, conditioned to produce the ward of the plaintiff, at all times when required by the court, and that while the action or suit is pending, he shall not be eloigned, abused or misused.

Sec. 23. Under the 1st proviso, the action of trespass in the nature of ravishment of ward, is an action sounding altogether in damages. The finding for the plaintiff, is altogether of damages, which may be made up of the value of the services of the plaintiff's ward, and recompense for any abuse, or injury, which he may sustain. For such damages and the costs, the judgment is entered up, and execution issues.

Sec. 24. Under the act, the court is authorized, on such finding for the plaintiff, to make a special entry, that the ward of the plaintiff is free. This entry ought to recite the action, the finding of the jury, and then should follow the order of the court, that the plaintiff's ward is free, and that he be discharged from the service of the defendant. This should be spread on the minutes of the Court. This entry is, it seems, evidence of the freedom of the plaintiff's ward in all other cases, and against all other persons. It is only conclusive, however, againstt he defendant; against all other persons, it is *prima facie* merely. Under the 2d section, the proceeding is by petition, setting out the action brought to recover the freedom of the negro, the possession by the defendant, with a prayer, that the defendant enter into the recognizance required by law. If this order be disobeyed, the defendant may be attached for a contempt, until it be obeyed; or it may be in analogy to the decision under the Trover Act, that the Sheriff might arrest the defendant under the order, and keep him in custody until he entered into the recognizance. I never knew the order made but once, and that was in the case of Spear and Galbreath, Guardians of Charles, vs. Rice.—Harp. 20. In that case, the order was complied with by the defendant on notice of it.

Sec. 25. The evidence of freedom is as various as the cases.

Sec. 26. Proof that a negro has been suffered to live in a community for years as a freeman, is *prima facie* proof of freedom.

Sec. 27. If before the act of 1820, a negro was at large, without an owner, and acting as a freeman for twenty years, the court would presume *omnia esse rite acta*, and every muniment necessary to give effect to freedom to have been properly executed.

Sec. 28. This rule applies also, when freedom has been begun to be enjoyed before the act of 1820, and the 20 years are completed after.

Sec. 29. Before the act of 1800 (hereafter to be adverted to), any thing which showed that the owner had deliberately parted with his property, and dissolved the *vinculum juris*, was enough to establish freedom.

Sec. 30. The validity of freedom depends upon the law of the place where it begins. Hence, when slaves have been manumitted in other States, and are found in this State, their freedom *here*, will depend on the validity of the manumission at the place whence they came.

Sec. 31. by the 7th, 8th and 9th sections of the act of 1800, it was provided, that emancipation could only take effect by deed; that the owner intending to emancipate a slave, should, with the slave, appear before a justice of the quorum and five freeholders of the vicinage, and upon oath, answer all such questions as they might ask touching the character and capability of the slave to gain a livelihood in an honest way. And if, upon such examination, it appeared to them the slave was not of bad character, and was capable of gaining a livelihood in an honest way, they were directed to indorse a certificate upon the deed to that effect; and upon the said deed and certificate being recorded in the clerk's office, within six months from the execution, the emancipation was declared to be legal and valid, otherwise, that it was void. The person emancipating was directed by the 8th section, to deliver to the slave a copy of the deed of emancipation, attested by the clerk, within ten days after such deed shall have been executed.

Sec. 32. The person emancipating, neglecting or refusing to deliver such copy, was, by the 9th section, declared to be liable to a fine of $50, with costs, to be recovered by any one who shall sue for the same.

Sec. 33. It was also provided by the 9th section, that a slave emancipated contrary to this act, may be seized, and made property by any one.

Sec. 34. It was held, for a long time, that when a will directed slaves to be free, or to be set free, that they were liable to seizure, as illegally emancipated. But the cases of Lenoir vs. Sylvester, and Young vs. the same, put that matter right. In them, it was held, that a bequest of freedom was not void, under the act of 1800—that it could have no effect until the executor assented—that when he did assent, it was his duty to so assent as to give legal effect to the bequest. As legal owner, he could execute the deed, appear before the magistrate and freeholders, answer the questions, and do every act required by the law, and thus make the emancipation legal.

Sec. 35. A slave illegally emancipated, was free, as against the rights of the owner, under the act of 1800; he could only restore himself to his rights by capture. The act of 1820, declares that no slave shall be emancipated but by act of the legislature. Still it has been held, in Linam vs. Johnson, and many subsequent cases, that if a slave be in any other way, emancipated, he may, under the provision of the act of 1800, be seized as derelict.

Sec. 36. The delivery of the deed of emancipation to the clerk to be recorded, is all the delivery necessary to give it legal effect; and the delivery to the clerk is equivalent to recording.

Sec. 37. The act of 1820, declaring that no slave should hereafter be emancipated, but by act of the legislature, introduced a new, and, as I think, an unfortunate provision in our law. All laws unnecessarily restraining the rights of owners are unwise. So far as may be necessary to preserve the peace and good order of the community, they may be properly restrained. The act of 1800 was of that kind. The act of 1820, instead of regulating, cut off the power of emancipation. Like all of its class, it has done harm instead of good. It has caused evasions without number. These have been successful, by vesting the ownership in persons legally capable of holding it, and thus substantially conferring freedom, when it was legally denied.

Sec. 38. So too, bequests or gifts, for the use of such slaves, were supported under the rule, that whatever is given to the slave belongs to the master.

Sec. 39. Since the act of 1820, if a negro be at large, and enjoy freedom for twenty-years, he or she is still a slave; as an act of emancipation passed by the legislature, will not be presumed.

Sec. 40. The act of 1820, was plainly intended to restrain emancipation within the State; it was, therefore, held by the court of appeals, that where a testator directed slaves to be sent out of the State, and there set free, such bequest was good.

Sec. 41. In 1841, the legislature, by a sweeping act, declared, 1st, That any

GENERAL LITERATURE, EDITORIAL, ETC.

1. A LEGEND OF THE OYSTER TRADE.

THE oystermen and fishermen of the lower Mississippi, who find their market in New Orleans, have become now an important class, and on more than one occasion have been felt in the character of the politics of Plaquimines. The time was, in the early days of the State, when these men were of a lawless and reckless character, and submitted to few of the restraints of civilized life. The old creole planters will tell many a tale of interest, in regard to them, at the evening fireside. On one of these occasions, a *venerable* gentleman of Plaquimines, not fifty miles from New Orleans, who is remarkable for his good cheer and sly humor, related to us, in the conviviality of an evening party, the following, which was received with breathless interest by all, and afterward written out. We give it to our readers, to unbend a little from the sternness of statistical details, and to illustrate the character of the men who are so potent in the MARKETS of New Orleans. If any person should regard the story *fishy*, and doubt the residence of so important a personage as "him of the cloven foot" among the creeks, bayous, islands, and mouths of the old "Father of Waters," we think such skepticism entirely misplaced, and can say from experience, if these be not his haunts, *they ought to be!* The visit which the story makes this personage pay to New Orleans will not, of course, be *questioned;* and the only doubt that arises, is, *if he has ever left there since!*

It was a beautiful and refreshing morning, in October, 178–, in the parish of Plaquimines. An old planter, a creole, with all the generous characteristics of a creole that day, had just awoke from slumbers which are only of "pure digestion bred." His attendant, Azor, a negro of the old school, was at his side with—start not, reader, if you are a novice in French creole life—a tiny cup of generous coffee, fit for the gods themselves, would they but accept a creole oblation, and a *cigar*, whose fumes not "Araby the blest" could rival.

Monsieur P. had no sooner attired himself, than, with Azor, he sought his favorite seat by the banks of the old Mississippi, under the shade of a noble oak. Here, writhing and curling above his head, in every grotesque figure, and enveloping many a luckless swarm of musketo revelers, who had "not gone home 'till morning," the smoke of the rare Habana went whiff, whiff, whiff, away. Monsieur had reached the very *nineteenth heaven*, and not Louis Le Grande could then have disturbed him by his presence.

Suddenly Azor leaped up, eagerly calling his master's attention to an object, which had at first the appearance of the root of a tree floating along, but something very different in the negro's more practiced eye. At a word his *pirogue* was bounding over the wave, and piloting back the *skeleton* of a boat, containing a man in a state of insensibility.

Various were the conjectures of master and man, regarding the fate and probable destination of the unfortunate stranger, thus thrown dependent upon their shore, and who was immediately conveyed to the hospitable mansion, where all that kindness could suggest for his recovery was at once adopted. When at last his eyes had opened, the most effectual of all restoratives was at hand; and though the wistful eyes of Azor might have seemed to covet the beverage for himself, yet willingly did his well-taught good nature present the genial "*brandy toddy*" to the eager lips of the sufferer—who, being now refreshed, at the earnest instance of the party, but with many ejaculations of thanks and shudders, begun his story, as follows:

"I am an Italian by birth, and have been in this country several years. I left the sea for the river trade, and then took to the oyster business on both sides of the Mississippi. One scheme above all others filled my head, and that was to have a boat of my own—be my own master, and go in quest of new and virgin oyster-beds, which I thought might be found among the neighboring bays and islands. Having accidentally caught a *pirogue* adrift, with the few dollars I had were purchased provisions, tools, etc., and I was about to realize my long-cherished hopes. Early in September, I entered Mr. Lanneau's canal, and steered for Bastian Bay. I will not describe the lakes and bayous leading to the Grand Chenier, but must call your recollection to the point where there is a small pass in the Chenier, some distance above Bastian Bay. Supposing it might be a nearer route to my destination, and that some discoveries might be made, I entered my pirogue. The pass became narrower and narrower as the boat advanced, and made me fear at last I should never have room to turn. It was about 4 o'clock in the afternoon, and everything seemed still and drowsy. An indescribable feeling of I know not what, began to steal over my senses. I cared not to move, and yet was but little at ease. Through the undergrowth I spied a shade under the thick forest near by. The ground in that spot seemed cleared. Leaving the canoe, I came to the margin of a beautiful lake, clear as crystal and smooth as glass, with abundance of fine shells. Far up the lake, which seemed two miles in width, there appeared to be two arms of water, and between them a piece of land much higher than any in the neighborhood. Supposing it the residence of some adventurers like myself, I embarked the canoe upon the lake, and steered for that point. Fish of all sorts, and in any quantity, sported in the waves, and it occured to me that oysters, too, might be found. To the touch of my pole the bottom seemed of shells. In a few moments I had struck a bank, and to my inexpressible joy, found a bed of oysters such as never man had seen before. The high land at the head of the lake being reached, I landed, and saw, in wonder, a region different from any in my experience among the bays and islands. The *pirogue* being unladen at the foot of a towering oak, I wandered along the shelly banks of either arm of the lake for a mile or more, in quest of a habitation, if such existed, but finding none, returned to the tree at dark, made a fire, cooked some oysters, spread a tarpaulin, and was soon in a profound sleep, from which the hot rays of the morning sun only aroused me. Judge of my surprise, to find the lake had risen three feet, and my canoe disappeared. In vain I searched for it through wearisome hours and a broiling sun. It was gone, and I sunk down hungry, mortified and perplexed. The air was calm but death-like, and the heat oppressive. The water, which I had not before in my excitement closely observed, was in commotion, with schools of fish, chasing each other and gamboling in every quarter—dog fish, red fish, silver-tail, gar, trout. Suddenly everything was in convulsion, and, most horrible, the surface covered with blood. A dreadful battle seemed waging beneath, and presently the fins and tails of two sharks appeared, and then the head of a monster with an aligator-gar, fully eight feet long, writhing in the death-grip of its jaws. Slowly the monster made its way to the shore, and to the very tree under which I had encamped, and where I stood trembling and without power of motion. The aligator—for it was such—presented so fair a front, in its advance, that I mustered at last the necessary nerve, took deliberate aim and fired. True to its mission, the ball sped, and the monster made but a single bound. The report of the gun in this lonesome place was wonderful. The fish, so frolicksome before, were still as death. The clouds themselves seemed agitated by the shock. The animal was twenty-six feet seven and a half inches in length, and his jaws when open at the widest part, two feet. With great toil, I cut him into pieces, and threw them into the lake, where the sharks, etc., might fight for them. From this employment my attention was called by what seemed instantly to threaten my life. Heavens! the wind had increased to a storm, and the waters of the lake were rising with greatest rapidity! The air darkened—flashes of lightning darted among the trees, and the waters seemed to roar again. Terrible then was the war of the elements! Crash went the sturdy oaks—away the saplings, torn up by the roots. The sea-birds screamed frantically, and in every wind there seemed to be an echo as from ten thousand demons. Gracious God, my hair was on end! I had been to sea from a child—had been shipwrecked, when the tempest swelled, and the winds

'Howled o'er the masts, and sung through every shroud:'

And when

'Pale, trembling, tired, the sailors freeze with fears,
And instant death on every wave appears:' *

I had seen all of that, but nothing so indescribably terrible as this. In less than ten minutes, however, everything was calm again, save the waters, which seemed in agitation, but subsiding with inconceivable rapidity.

"'The storm over, I bethought me of some mode of escape from a place so extraordinary and yet so inviting. In two days, I had collected material enough to build me a boat, and went to work upon it heartily. In four days—for I am a tolerable carpenter—the skeleton on which you found and rescued me, was complete. To fit on the planks, however, was an arduous and almost impossible task, with my skill. Like the man in the fable, I prayed even for Lucifer to help me. In my fatigue, I fell upon the earth altogether overcome. I had no sooner revived, than afar off appeared a man, dressed as a sailor with blue jacket and trowsers, a stick on his shoulder with a bundle attached, advancing leisurely and with unconcern toward me. On his nearer approach, his countenance made me uneasy, and his grin, as he nodded familiar salutation. Fixing his eyes on the boat, he remarked, 'So you wish some one to help you, eh? I am a carpenter, was cast away in a storm lately, and with only what you see in my hands saved, am making my way to New Orleans.' Softening his countenance then, and with a bland and insinuating smile, which banished every ill impression I had formed, he continued, 'I will help you finish the boat, load and sail her to New Orleans, as oysters and fish are so abundant here, and we can perhaps make a profitable business.' I soon agreed. The stranger with a practiced eye examined the planks upon which I had been working, said they were not suitable, and that he had seen very fine ones in a place not far off, of which he would immediately go in search. In the meanwhile I might take my dinner, as he had already taken his on oysters, and rest my wearied body. He started, and appeared to progress without effort and at a rapid pace. Curious thoughts in regard to this strange man were passing through my mind, but were dismissed when I thought of his pleasant smiles. The dinner being dispatched, in about an hour he returned with what I thought a cartful of plank and boards on his shoulder, which on being thrown to the ground, to my amazement, made no noise! The axe in his hand literally struck off chips like sparks from a razor on the grindstone. I gazed with wonder, as board after board, with extraordinary rapidity, was added to the framework. He turned toward me with sardonic grin and said, perhaps I had better take some rest, as he could now get on very well without me. I felt uneasy, anxious, bewildered. In spite of all my alarm, a drowsy feeling had crept over my limbs, and my previous fatigue was such that I accepted the offer, and was soon profoundly asleep. On awaking, the boat had been finished and launched, and the extraordinary builder, to my expressions of surprise, replied that I had been forty-eight hours in sleep! ‘Take the boat,’ he said, ‘over to yonder bank, and load her with oysters, while I shall go to seek a mast and some canvas I saw not far off, drifted up, no doubt, from some vessel wrecked in the late gale.’ In a short time he was back with oars and sail, which he had soon fitted. ‘To-morrow let us start for New Orleans.’ I asked him to join me in supper, which was then ready, but he again declined, having feasted, he said, upon a bed of oysters found near the falls, and which would serve us on a future occasion.

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* We suspect our friend here of a little poetical embellishment of his own; for we are not to suppose that the Mississippi fishermen, like those of Attica, quote Homer with facility. Verily, Colonel, for this offense, you should be "shot with a pack-saddle."—ED.

“In the morning at dawn, I found my companion had already loaded the boat and had her ready. We were in the river in little or no time. The wind swelled out sails, and seemed never to lag, as we beat every craft in our voyage to New Orleans. We found a man on the Levee ready to buy our oysters, which he unloaded himself, and paid for in forty silver dollars, which my companion received. Having purchased a few biscuit, some fresh meat, tobacco, and a jug of whisky, we set off late last night for the return. To speak the truth, I more than once meditated an escape from this strange copartnership—but then the irresistible *smile* and the brilliant prospect would overcome me again.

“About twelve miles from your place, and just a little before daybreak, I roused myself from my drowsy condition, and asked my companion what he had done with the forty dollars. ‘Never mind,’ said he, ‘you are not entitled to any of this load. Was it not I who finished, launched, and loaded the boat?’ Upon this I grew very angry, and swore I would have my rights. ‘*Rights!* RIGHTS!’ said he, with a grin which roused my ire even still more, ‘ha! ha! ha!’ I made at him with a leap, and an exclamation, ‘yes, RIGHTS! and may the Almighty God have mercy on me, if I do not get them, and have my share of that money, or send you to the Devil, where you came from!’ At that moment, a clap of thunder seemed to strike the boat again into the skeleton she was at first and she is now, as you found her, and every plank, oar, sail, mast, had disappeared, and with them the man who had been my companion, and whom I now know to have been the Devil himself. This is my story.” The fisherman here crossed himself several times devoutly: Monsieur P., having taken too much snuff, sneezed—and Azor, thinking he smelt sulphur somewhere, went to the window to see if the “skeleton boat” had not been whiffed away in a cloud.*

2. THE SWORD AND THE OLIVE BRANCH.

This paper was prepared in hasty sheets, during the war, and was intended for the press. But the writer, thinking that the voice of a single man, at great distance from civil headquarters, would not be regarded, and disliking that the cry of *Treason* should be raised against him, withheld it. In these piping times, he thinks a little military criticism can do no harm, and having revised and amended his manuscripts, has offered them *to us as mere abstractions*, giving to *us* a *hit* by the *way*. As the writer disclaims all personalities in an offensive sense, we give them to the public, assuming no responsibility for his opinions of matters and things; believing, however, that though many of our readers may reject his reasoning and conclusions, that some grains of wheat may be gathered worthy of preservation.

The writer rebukes us for bad printing of his Latin (about which he says he is more tenacious than of his English), and requests us, if we *muster* any *lines* or *columns* of *errata*, to notice *facem* and *pacim*, incorrectly printed for *pacem*, on page 305, volume VI, in his article, No. 1, on the *Sword and Olive Branch*.

J. D. B. De Bow, Esq.—To *conquer a peace*, has been the cry, since the American and Mexican armies first met in deadly conflict, on the banks of the Rio Grande del Norte. A venerable gentleman took up the words from the lips of a high civil officer at the headquarters, Washington, and they have been echoed and re-echoed, through all the length and breadth of this fair Republic.

If the distinguished civilian who first started this cry, had been construing Latin to the Rev. Joseph Caldwell, in the classic groves of Chapel Hill, and was engaged with the 6th Chapter of the 1st Book of Cæsar's Commentaries on the Gallic War, he would have encountered this passage: “Propterea quod Helvetiorum inter fines, et Allobrogum qui nuper *pacati* erant, Rhodanus fluit” etc., etc. If the Scholar had said, “Because between the borders of the Helvetians and Allobrogians, with whom *peace was lately made*, flows the Rhone,” etc., the President would have said, "You do not pursue the idiom of the Latin language, nor give the correct English. *Pacati* means *subdued;* they were rendered peaceable enough, but it was effected by subjugation. See your note 'Nuper *pacati* dicuntur quia biennio ante fuerant *domiti*, a C. Pomptino;' the meaning of which is, that the Allobrogians were subdued (*domiti*), subjected to the Romans, two years before, by Caius Pomptinus."

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* This story, or the whisky punch which was handed round immediately afterward, piping hot, suggested several others from different quarters; but *under the circumstances*, none of *them were* sufficiently well defined to make a strong impression.

In the 14th chapter, 1st Book of the Commentaries, the Scholar would meet with this passage: "Si *pacem* Populus Romanus cum Helvetiis *faceret*," which he would properly translate, "If the people of Rome were disposed to make peace with the Helvetians." Sin bello persequi, if, on the other hand, Cæsar chose to carry on war, that is, to attempt to conquer, or to subject, or to subdue the Helvetians, they reminded him of their valor, and the ancient disgrace of the Romans in a former war, etc., etc.

Now, if this Chapel Hill Scholar should chance to rise to eminence among his countrymen, and declare in later days that Dr Caldwell was not only a most accomplished President of a College, but would have been distinguished as a Statesman or a General, had he chosen the field of politics or of arms (in which wise observation every Philosophical Student of the University of North Carolina would concur), it became this Scholar to recollect his Latinity, and to measure his words and his conduct, before he measured swords with the enemy.

In carrying war into the Mexican territory, any classical or military man would have supposed, that as the Mexicans so much resemble the Gauls, a great civil Chief would have turned over the leaves of the Commentaries, to arrive at the fruits of historical experience If we are not Romans, the Gauls and the Mexicans are much alike. We call them indolent and barbarous and our soldiers call them brave. That they are hardy and bold behind breastworks bristled with cannon and defended by a multitude of men, our heavy losses too truly attest. Like the Gauls, they are jealous of their borders. Like the Gauls, they are tenacious of their rights and of their territory, from their apprehension of the lust of power and of aggrandizement which form the features of their more powerful neighbor. They are unfortunately ignorant, and consequently treacherous, fond of war, and devoted to their chiefs.

If we had designed to vindicate boundary, to treat, to secure peace, that was one thing. If we designed to make war, to conquer, to subdue, to acquire territory, that was quite another affair. The cry, after the first hostilities, was a peace cry—construing the English words according to their common acceptation. But to military ears it sounded differently Was this Delphic? Was this, like a message to the Senate, diplomatic? Whatever it meant, the pursuit of the object was attended with immense waste of treasure, awful spilling of blood, and useless and wanton sacrifice of the lives of precious Americans. We lost more in battle, and by disease in an accursed climate, than all Mexico could pay for, by all her lands, and rivers, and mines. "Dum vitant stulti vitia, in contraria currunt:" when *simple* men (*cunning*) seek to avoid one error, they fall into its opposite.

The words, *conquer a Peace*, seemed to show a pacific front, and the venerable Editor who arrayed them in his proof-sheets, expected, before he had set up many types in columns and in lines, to behold the Dove with Olive Branch in mouth, approaching civil headquarters, with glorious tidings. Alas! his meekness and humanity must have been sorely tried, though he never waked up to the stratagem. The more distinguished Leader whom he followed, saw, from his greater elevation, men contending in bloody strife, and iron and lead thrown in storms from the mouths of most unpeaceable weapons.

The object was the acquisition of territory *beyond* the Rio Grande, through all the evolutions, and this was to be gained by bringing on war, and then demanding territory for indemnity. He who insists that peace was the object, asserts what he cannot support even by the strength and shoulders of Atlas. The great inconsistency would have to be sustained, that *Pacem bello antefero* (I prefer Peace to War) means the same thing as *Vincere pacem* (to subdue, to subjugate), the *Peace Cry*.

You cannot expect me, sir, a plain man, to travel two roads at once, any more than you could expect me to comprehend the profundity of the three lines of invasion pointed out by a distinguished *quasi* military Senator. I must insist therefore, that the great civil Chief meant one thing, and that his venerable Editor meant another; and that if the two *Senior American Generals* had not been *great commanders*, we should have realized the truth of the Latin proverb, "He who pursues two hares is sure to catch neither."

When we say *Vincere pacem*, something must be understood, for the expression is elliptical. *Vincere Hostes, iisque pacis conditiones imponere.* We cannot conquer peace, or a Peace; but we may subdue the enemy and seize his territory, thus imposing conditions of Peace. Gerere bellum, et bello persequi (to make war and pursue the war), was the original design, that the case of the *uti possidetis* might be invoked in framing the treaty for indemnity. The *uti possidetis*, in the beginning, would not do, for there was the Nueces, and there stood quiet, modest, unassuming Peace. The Rio Grande reached and the boundary line vindicated, that would not do, for then nothing could be had beyond, and the uti possidetis would come too soon. So the *initiative*, as it was termed, had to be taken, and our conquering legions must bathe their limbs in Pacific seas, beyond the Sierra de los Mimbres, and the Snowy Mountains, and nearly one-half of Mexico is attached by *absorption*. This process, to prosaic men, residing on the banks of the Mississippi, who are accustomed to the slow process of the Father of Waters in making land by alluvial deposits, appears astonishing and magnificent! Verily, the author of this absorbing scheme has surpassed the great Mississippi in his conceptions, and the great Ghengis Khan in predatory evolutions for acquiring territory.

On the subject of Peace, the Mexicans were not allowed *volition*. We crossed the Nueces invaded Tamaulipas, and encamped on the banks of the Rio Grande. The Americans saw the moon and stars above them, but they stretched their limbs on Mexican corn and cotton fields. Peace would have continued and been maintained by encamping on the left bank of the Nueces. The show of the Olive Branch, on our march to Point Isabel, the Mexicans distrusted. When the British pretended peace, in their military occupation of Boston, neither Hancock nor Patrick Henry believed the cry.

The orders to General Taylor for the forward march, were of date 13th January, 1846, and yet Commodore Sloat, in command of the Pacific Squadron, received instructions dated June 24, 1845, and an officer was sent from Washington, in November, 1845, with instructions to Capt. Fremont, both looking to the occupation of California, and a treaty based on the *uti possidetis*. "*The basis of the uti possidetis*," are the *very words* used by the Naval Secretary, in his developed orders to Commodore Sloat, of July and August, 1846. I hate the semblance of political discussion, and prefer making points in the notice of military movements. But I think I have rendered my assertion unassailable, that the *object* of the orders for General Taylor's march to the Rio Grande, was not peace, *but war*—that the *sword* was held out to *subdue*—and that the display of the *Olive Branch*, by *our Government*, was ungracious and insincere.

H.

3. EDITOR'S NOTE.

Being temporarily absent from the city, though expecting to return by 20th August and remain, it is probable some communications intended for this number, have not been noticed in it Our Periodical and Book notices must be delayed for a similar reason. General Hunt, on the Finances of Texas, will not be neglected in our next.

We call attention again to the COMMERCIAL DEPARTMENT of the University of Louisiana, in which Lectures will be delivered during next winter, etc., and request a reference to the Circular in our last number, and the advertisement in this.

Our subscribers will please oblige us by prompt remittances, and by increasing the patronage of the Review among their friends. The triumph of the work over all obstacles, shall now be complete. No man can know what these obstacles have been. We also invite articles, and the correspondence of practical citizens.

4. LOUISIANA HISTORICAL SOCIETY.

The Editor acknowledges the receipt, as Secretary, of an interesting letter from John Perkins, Esq., now collecting documents in Europe, from which he makes this extract: "I have presented, through you, to the Society, a Summary of our history, embraced in one large quarto volume of 500 pages, reaching down to 1710. I must ask your especial examination of this volume, for I believe it will be found to contain matter of much interest, that has never before been published. The compilation of the rest of the documents is progressing, and I believe that, by next fall, the State will be in possession of a complete Index to all the papers in any of the French Archives, pertaining to our history. My health has been so delicate that I have been compelled to rely almost entirely upon Mr. Margry, who has brought to the discharge of his engagement with me, the zeal of a student of history, who has made the Archives the study of years, and who, I hope, may find a juster recompense for his labors in the future employ of our State, should it make an appropriation, than he has received in the small sum I have given him. Mr. Margry will publish the ensuing year, a work upon the numerous attempts to find an Eastern Passage through America, made by the early French voyagers. He has also in hand, a life of La Salle, that will throw much light upon the earliest period of our history. I feel it but due to him, that I mention his name to you, with the request that you urge the propriety of his being employed in any future researches that may be made."

5. CINCINNATI MERCANTILE LIBRARY.

We have received the Report for 1849. The regular and honorary members reach 1,517 in number. The library consists of 8,195 volumes—2,098 volumes, at a cost of $1,955 61, having been added in one year. Numerous lectures, within the past year, have been delivered before the association. We congratulate the Society upon its eminent and flattering success. The officers for 1849, are

George T. Stedman, President;
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James Lupton, Corresponding Secretary;
Robert L. Fabian, Recording "
George S Dodd, Treasurer:

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The Lectures in this College, lately concluded by the graduation of a large class, will commence on the 20th of November, in the capacious edifice on Common street. Having adopted and maintained a high standard of medical education, the Professors, from their connection with the City Hospital, enjoy superior advantages for practical instruction in clinical Medicine, Surgery, and Midwifery. There is a fine amphitheater in the Charity Hospital, for surgical operations and lectures. Opportunities for the pursuit of practical anatomy are unequalled—subjects being supplied gratuitously in any number. For further information, persons will please address the Dean for the printed circulars and catalogue. For the correction of false statements it is proper to mention, that the expenses of boarding, &c., in this city are much reduced, that the epidemic yellow fever never prevails after the first week in November, and that, hereafter, contagious diseases will not be promiscuously admitted into the medical wards of the Hospital.

JAMES JONES, M. D., Dean.

LAW DEPARTMENT.

The Lectures and instruction in this department will commence on the first Monday of December next, and continue until the 2d Monday of April.

Those by Professor Bullard will embrace History of Roman Law, Analysis of the general principles of Roman Law, on the approved method of the German School; Jurisprudence of Louisiana, compared with Roman Law, and French and Spanish codes; outline of Land Titles in Louisiana, derived from Spain, France, and the United States.

Those by Professor McCaleb will embrace Admiralty and Maritime Law, International Law, including Law of Prize, Rights of Peace and War, Treaties, etc.; Jurisdiction United States Courts, Supreme, Circuit, District, Instance, and Prize Courts, &c.

Those by Professor Hunt will embrace Commercial Law, as it relates to mercantile persons, property, contracts, remedies, partnerships, corporations, bills of exchange, freight, average, insurance sale, guarantees, lien, &c., &c.; Criminal Law and Practice; Law of Evidence.

Those by Professor Monroe will embrace the Common Law and Equity, Jurisprudence, and Practice and Pleadings in Civil Cases; Constitutional Law.

Chief Justice Eustis will deliver a series of Lectures on the Rights of Persons and the Conflict of Laws; and Christian Roselius, Esq., will assist as Adjunct-Professor, in the department of Civil Law.

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III. Progress and results of Agricultural Science; Principles of Agriculture; Comparative condition of Agricultural, Commercial, and Manufacturing communities; Statistics of Agriculture, etc.

IV. Origin and Progress of the Manufacturing System; its relations to the other pursuits; Invention and Machinery in Manufactures; Condition of the Manufacturing Classes; Statistics of Manufactures, etc.

A course of Lectures will be delivered upon the Progress of the American Republic, and occasional *Public Lectures* upon the same subjects. The advantages of Public and Private Libraries, Reading Rooms, and Business Experience enjoyed in New Orleans, are unrivalled.

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OF THE
SOUTH AND WEST,

ESTABLISHED JANUARY 1, 1846.

J. D. B. DE BOW, EDITOR AND PROPRIETOR.

VOL. VII, Old Series. SEPTEMBER, 1849. VOL. I, NO. III, N. S.

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Vol. VII, Old Series. OCTOBER, 1849. Vol. I, No. IV, N. S.

ART. I—THE LAKE AND VALLEY TRADE.

EXTENT OF OUR INLAND TRADE; TRADE AND TONNAGE LAKES, 1846; 1850 AND 1860; STEAM TONNAGE, TRADE AND NAVIGATION, WESTERN RIVERS; POPULATION OF LAKE COUNTRY, AND COMMUNICATION WITH MISSISSIPPI AND THE ATLANTIC; EXTENT OF LAKES; AMERICAN AND BRITISH MARITIME POWER ON LAKES, ETC.

No COUNTRY in the world can be said to possess, in an equal degree with ours, the facilities for an extended *inland commerce* between its parts, and a *foreign commerce* between the whole and the other maritime and trading powers. First we have the Atlantic, with its deep bays and harbors, stretching nearly fifteen hundred miles along our shores. Then is added to us the Missisippi, that great "inland sea," whose sources alike ripple in the Rocky and the Alleghany Mountains, and whose tributaries drain an empire. The Gulf of Mexico, on our southern limits, is a boundless expanse. The Pacific for a thousand miles, has fallen into our possession. Upon our northern border flow the Great Lakes, which, as the centers of immense commerce, vie already with the old "Father of Rivers" himself. Never was nation so favored, in the history of man. Who shall wonder that, in the consciousness of maritime power, we have already become arrogant, and threaten, in imitation of the Dutch, to raise the broom to our masthead, as though we would sweep, with it, the seas.

Having given very full statistics, at different times, of the Atlantic commerce, the commerce of the Pacific, of the Gulf of Mexico, and the Mississippi, it occurs to us, we have not done full justice to the LAKES. We have, indeed, furnished several papers upon them, as will be found from our volumes; but not one appears, upon examination, sufficiently elaborate or satisfactory.* We, therefore, seize the present opportunity of a visit to these Lakes, and passage across them, to present what matter could be collected.

At the last session of Congress, Colonel Albert, being called upon to report such information as could be had by the Engineers' Department, in regard to the Lakes, presented a document of great interest and value, which, being official and of latest date, will form the groundwork of our present remarks.

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* See Commercial Review, Vols. I, II, IV, V, VI, and especially the articles entitled, "Western Lakes," "Progress American Commerce," "Progress Great West"; also, Vol. VII, No. 1, article, "Communication between Atlantic and Pacific."

The value of Lake commerce, in 1841, was

Imports,	$33,483,441
Exports,	32,342,541
	$65,826,022

Or, dividing this amount by two, since the exports of one place are the imports of another, we have $32,913,011, as the floating value of Lake commerce, in 1841.

TRADE OF LAKES, 1846—EXPORTS AND IMPORTS.

Oswegatchie District,	$180,555	Erie.	
Champlain.		Buffalo,	$48,989,116
Whitehall,	6,327,489	Conneaut,	380,475
Plattsburg District,	1,160,844	Ashtabula,	715,467
Burlington, "	3,777,726	Fairport,	819,584
Ontario.		Cleveland,	12,559,110
Sackett's Harbor District,	2,735,091	Sandusky,	5,943,127
Dexter Port,	484,575	Monroe,	9,519,067
Port Ontario,	423,724	Detroit,	8,706,348
Oswego,	9,502,980	Erie,	6,373,246
Big Sodus,	39,206	Black River,	215,040
Rochester,	212,926	Vermillion,	137,770
Pultneyville,	20,342	Michigan.	
Niagara,	606,863	Chicago,	3,927,150
		Total commerce, 1846,	$123,829,821

Or, dividing, as in 1841, by two, we have a total of $61,914,910, having nearly doubled in five years, or, to be more accurate, increased seventeen and a half per cent. per annum. The registered, enrolled, and licensed tonnage of the Lakes, was:

TONNAGE, 1846.

Champlain District,	3,192	Cape Vincent,	2,230
Sackett's Harbor District,	4,279	Presque Isle,	2,993
Oswego "	16,046	Cuyahoga,	18,526
Niagara "	75	Sandusky,	2,864
Genessee "	769	Maumee,	3,163
Oswegatchie "	2,058	Detroit,	24,804
Buffalo "	24,770	Mackinaw,	1,067
		Total Tonnage,	108,836

having increased since 1841, in very nearly the precise ratio of the exports and imports. The whole number of clearances and entries upon the Lakes, was, in 1846, 15,855, and the number of tons of merchandise carried, 3,861,088, also an increase of over seventeen and a half per cent. per annum, since 1841.

It ought to have been observed above, that in the list of Lake ports and the amount of their trade, the following were omitted as not ascertained: Black Rock, Silver Creek, Irving, Portland, Huron, and Dunkirk, on Lake Erie; St. Joseph, Grand River, Kalamazoo, New Buffalo, Michigan City, Mouth of Calumie, Little Fort, Southport, Racine, Milwaukie, Sheboygan, and Manitowoc, upon Lake Michigan.

In addition to the American tonnage, the British have upon the Lakes, 46,575 tons, of which 30,000 tons are employed in the American trade—making the whole amount of tonnage in the American trade for 1846, 136,836 tons.

The value of this American shipping, in 1846, is estimated by one account $5.341,800, and by another, $6,000,000. It may be safely put down at $7,000,000, including the value of British vessels employed by us. The annual expenses upon all this shipping, including interest and insurance, is very near $2,000,000.

The Passenger trade of the Lakes amounts to about 250,000 per annum in numbers, and cost of carriage, perhaps, $1,250,000. The number of mariners employed, 6,972.

If we suppose that the same ratio of increase, has been observed since 1846, we may state the commerce of the Lakes, as compared now with 1841, as follows:

COMMERCE OF THE LAKES, 1849–50.

Exports and imports, increase 4 yrs. at 17½ per cent. per annum,	$105,255,347
Tonnage, " " " " " tons,	185,017
Tons merchandise carried,	6,536,844
British commerce employed,	51,000
Value American shipping,	10,200,000
Expenses " "	3,400,000
Passengers carried,	425,000
Receipts from passengers,	2,335,000
Mariners,	10,500

The Buffalo Advertiser has, however, furnished the following as the

TONNAGE OF THE LAKES, 1849

Ports.	Steamers and Propellers.	Barques and Brigs.	Schooners.	Sloops and Scows.	Total.	Tonnage.
Buffalo,	42	31	85	5	163	42,265,40
Presque Isle,	5	4	14		23	6,237,07
Cuyahoga,	10	23	55	17	105	22,949,86
Sandusky,	7	4	34	3	48	8,458,25
Miami,	4		11	2	17	2,921,27
Detroit,	43	9	109	36	197	23,609,83
Chicago,	2	13	55	1	71	11,387,42
Michilimackinac,	3		21	1	25	1,671,51
Lewiston,	1		8		9	753,11
Rochester,	2		6	1	9	1,298,00
Oswego,	13	9	80		102	17,813,01
Oswegatchie,	4		4		8	2,215,63
Cape Vincent,		1	8		9	1,708,63
Sackett's Harbor,	2	4	33		102	5,484,12
Camplain,	2		25	63	90	4,653,51
	140	98	548	129	915	153,426,62

BRITISH TONNAGE ON LAKE ONTARIO.

The comparative increase of steamers, propellers, and other vessels, owned on Lake Ontario, and employed on the inland waters of Canada, during the season of 1846 and 1847, was as follows:

	1847.	1846.
Steamers,	67	57
Propellers (lake and river),	14	13
Ships,	2	2
Brigantines (30 tons and above),	5	5
Schooners,	110	94
Barges,	300	300
Total,	498	471
Tonnage (aggregate),	63,346	56,380
Valued at	$2,750,000	$2,472,000

There were built on Lake Erie, during 1848, and to be in commission in 1849, the following *steamers*, viz.: At Sandusky, the Alabama of 1,200 tons; at Buffalo, the Keystone State, of 1,354 tons; at Detroit, the May Flower, of 1,300 tons; at Cleveland, the ———, of 1,300 tons; at Newport, the Atlantic, of 1,000 tons. And the following *propellers*, viz.: at Cleveland, the ———, of 450 tons, and the Troy, of 350 tons; at Buffalo, the ———, of 450 tons—in all, 7,404 tons.

TOTAL TONNAGE AND VALUATION.

45,067	tonnage of steamers, valued at	$3,380,000
15,685	" propellers, "	950,000
101,080	" sail vessels, "	3,538,000
161,832		$7,868,000

In order to form any estimate of what the value of the Lake commerce, ten years hence, say in 1860, will be, it is necessary to consider the nature of the country which is tributary, "the region whose intercourse is facilitated by this commerce, the productiveness of the soil of the adjacent States; extent of that soil, and extent of lands yet unoccupied; the population depending upon the Lakes, as a means of communicating with a market already great and daily increasing; the agreeableness of the climate and its general salubrity; the character of the population, and of the foreign emigrant, to whom the Lake region is so great a favorite; the cheapness of the land," etc., etc. With these elements of progress at work, it cannot be unfair to argue, that the increase for the next ten years, will not be materially less than in the years from 1840 to 1846. Upon this basis, we construct the following table:

COMMERCE OF LAKES, 1860.

Value of exports, imports, and passengers,	$213,507,385*
Amount of tonnage on Lakes,	367,085
Value American shipping on Lakes,	$14,208,000

If we compare the results as furnished, with those from the Western Rivers, some instructive comparisons may be made.

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* The net value is alone involved in this amount, that is, half the aggregate value of the exports and imports; since the exports of one place are imports of another.

STEAMBOAT TONNAGE WESTERN RIVERS.

	1842.	1846.
New Orleans,	80,993	—
St. Louis,	14,725	—
Cincinnati,	12,025	—
Pittsburgh,	10,107	—
Louisville,	4,618	—
Nashville,	3,810	—
Total,	126,278	249,055

In addition, it is estimated that in 1842, there were 4,000 boats of other kinds, flat-boats, etc., employed, with an aggregate tonnage of 300,000 tons, making the whole tonnage for that year 426,278 tons. It is supposed that the flatboats carried about 600,000 tons, and the steamboats 1,262,780 tons, making a total of merchandise transported on the Western Rivers, in 1842, of 1,862,780 tons. Estimating these tons as equally valuable with those of the Lakes, and it is thought they are more so, and we have Lake tonnage both ways, or duplicate enumeration, 3,861,088, divided by two, 1,930,544, worth $64,913,910, or $32.07 per ton: therefore the 1,862,780 tons of the River trade, with New Orleans, will be $69,739,354, for 1842. This is Col. Albert's calculation. The New Orleans returns, however, show a receipt at that city, in 1842, of 45,716,045, and in 1846–47, of 90,033,256 tons, being a little less than double in four years; but taking the average receipts from 1842 to 1845, viz., 54,184,484, and comparing them with average receipts from 1845 to 1848, 76,051,248, we have an increase of very nearly ten per cent. per annum. Col. Albert makes the per centage only about five and three-fourths per cent.—clearly an important mistake. A very respectable committee in Cincinnati, in 1842, estimated the aggregate trade on Western Rivers, exclusive of that of New Orleans, at $70,000,000. Supposing this to have increased at the same rate as New Orleans trade, we would have for 1849, $111.000,000, and the whole Western River trade, in 1849, $190,777,151 net; or a floating trade of double that sum, the exports of one town being the imports of another, viz., $381,554,362. If the passenger earnings be added, the *net* result of river trade will be swelled to nearly $195,000,000. The value of all the boats, in 1842, was $10,522,240. If they have increased in the same proportion as the trade of New Orleans, the present value per annum of boats afloat would be $20,000,000 nearly. The working expense of this craft, and sustaining it, is over one hundred per cent. on its cost per annum, or on $20,000,000 about $25,000,000. The boatmen on Western Rivers, in 1842, were 20.418: at ten per cent. increase, we have in 1849, nearly 20,000.

By another estimation based upon the increase of tonnage upon Western Rivers, which from 1842 to 1846 was twenty-four per cent., and supposing the same increase preserved since, we would have the value of river trade in 1849 $218,400,000, or including passengers, about $225,000,000 net, or a floating trade of $450,000,000, annually; that is, adding up the exports and imports of all the various towns.

The whole population dependent *entirely* upon these Lakes. Col. Albert estimates at 6,191,555 in 1846, or in 1849, probably 7,000,000;

but this is evidently much below the figure, since the West increases faster than the Union, and should rather be 8,000,000.

What the future population of the Mississippi Valley may be, and what the amount of its commerce, are questions of some importance, but in the discussion of which the imagination is not unapt to run wild and become bewildered. Even sober reason seems elevated upon the wings of fancy. Upon the calculation of Col. Albert, the Valley contains 666,666 square miles of good arable land. To people this region with the average of the fertile parts of Europe, 110 to the square mile, there would be a total of 73,333,260 inhabitants; with the density of France, 165.1 to the mile, it would be 110,066,556; and of Great Britain, 222.6 to the mile, 148,399,851. Immense periods may be required to produce this, but the result is more than practicable, even with *great* prosperity. If, however, the advances for the next twenty years are equal to those of the last six or eight, five per cent., we shall have, in 1870, 17,775,272 inhabitants in the great Valley.

The productions of these people will follow some fixed relation to their numbers; and if the productiveness of the region be considered, Col. Albert's calculation upon the basis of Professor Tucker, will appear reasonable, viz., as 8 is to 5: i. e., to every five per cent. increase in population, there will be an eight per cent. increase in production, reversing Mr. Malthus's rules. Taking the mean of the figures, found by the two estimates of Western commerce we have given for 1849, the amount for 1850 will be at least $250,000,000. Col. Albert estimates $274,000,000, and calculates the increase at eight per cent., viz:

Commerce Great West, 1850,	$274,459,816
" " " 1860,	494,027,668
" " " 1870,	889,249,802

The figures seem prodigious, but governed by the light of the past, it may be questioned whether we have a right to doubt. The most sober-minded and skeptical reader will not, however, venture to fix the population of the Valley, in 1870, at less than 15,000,000, and its commerce at 500,000,000, being little less than the whole Union now. The probable navigation by steam on the western waters tributary to the Mississippi, is estimated by Col. Long, of the Engineers:

MILES WESTERN STEAM NAVIGATION.

Mississippi and Branches.		Obion,	60	Big Black,	150
Mississippi proper,	2000	Forked Deer,	195	Bayou De Glaze	90
St. Croix,	80	Big Hatchee,	75	Bayou Care,	140
St. Peters,	120	St. Francis,	300	Bayou Lafourche,	60
Chippeway,	70	White,	500	Bayou Rouge,	40
Black,	60	Big Black,	60	Bayou Plaquimines,	12
Wisconsin,	180	Spring,	50	Bayou Teche,	96
Rock,	250	Arkansas,	600	Grand River,	12
Iowa,	110	Canadian,	60	Bayou Sorrele,	12
Cedar,	60	Neosho,	60	Bayou Chien,	5
Des Moines,	250	Yazoo,	300	*Missouri and Branches.*	
Illinois,	245	Tallahatchee,	300	Missouri proper,	1500
Maremec,	60	Yallabusha,	130	Yellowstone	300
Kaskaskia,	150	Big Sun Flower,	80	Platte River,	40
Big Muddy,	5	Little Sun Flower,	70	Kansas,	150

Osage,	275	Green,	150	Bayou Boeuf,	150
Grand,	90	Barren,	30	Bayou Maçon,	175
Ohio and its Branches.		Wabash,	400	Bayou Louis,	30
Ohio proper,	1000	Cumberland,	400	Tensas,	150
Alleghany,	200	Tennessee,	720	Lacke Bistenaw,	60
Monongahela,	60	*Red River and Branches.*		Lake Caddo,	75
Muskingum,	70	Red River proper,	1500	Sulphur Fork,	100
Kanawha	65	Wachita,	375	Little River,	65
Big Sandy,	50	Saline,	100	Kiamichi,	40
Scioto,	50	Little Missouri,	50	Boggy,	40
Kentucky,	62	Bayou D'Arboune,	60	Bayou Pierre,	150
Salt River,	35	Bayou Bartholomew,	150	Atchafalaya,	360
				Total,	16,674

The population which depends upon the Lakes for a market, is embraced within eight States, viz:

Vermont,	177,278
New York,	608,116
Pennsylvania,	126,094
Ohio,	723 119
Michigan,	212,267
Indiana,	250 263
Illinois,	93,069
Wisconsin,	23,045
Total, 1840,	2,313,251
Add increase since,	1,256 625
Total, 1850,	3,569,876

The estimate is made upon an annual increase of five per cent. per annum, which was about maintained from 1840 to 1846.

The number of American steamboats on the upper Lakes, above Niagara, was in 1847, 62; propellers 18, barques and brigs, 59; schooners, sloops and scows, 319. The average tonnage of steamers being 400, propellers 328, brigs and barks 230, schooners 152, sloops, etc., 46. There were on Lake Ontario, at the same time, 8 steamers of average 277 tons, 10 propellers of 275 tons, 186 sailing vessels of 114 tons; on Lake Champlain 3,192 tons, not enumerated.

The whole amount expended by Government, from 1806 to 1845, upon improvements of the

Lake Harbors,	$2,790,500
Western Rivers,	2,758,800
	$5 549,300

The great Lakes are connected with the Valley of the Mississippi by—

1. *Illinois and Michigan Canal,* 96½ miles long, 60 feet wide, and 6 feet deep; locks 17; total lockage 158 feet. It connects the Chicago, which empties into Lake Michigan, with the Illinois at La Salle, 213 miles from the Mississippi. The Illinois is navigable all the year in flatboats, and 4 months by steam (the ice season being excluded).

2. *Wabash and Erie Canal.* This extends from Lafayette, about 378 miles above the Wabash mouth, where it enters the Ohio, to Toledo on the Maumee, adjacent to Lake Erie, and is 187 miles long. It

is intended to complete the canal from Lafayette to the Ohio River. At a place called *Junction*, this canal intersects the Miami Canal from Cincinnati. It is probable the Wabash and Erie Canal is now complete to Terre Haute, on the Wabash. The *Muskingum Improvement* extends to the Muskingum River, at or near Zanesville, and is 91 miles long.

3. *Sandy and Beaver Canal*, connecting the Beaver River with the Lake from the Ohio. 4. *Mahoning Canal*, being a cross canal of 83 miles long. There is a canal called the *Beaver and Erie*, 136 miles long, connecting with the Ohio 28 miles below Pittsburgh. The connection with Lake Ontario is by the Welland Canal in Canada, and with Ontario and Champlain by the New York canals. The points of union of these canals, then, with the Mississippi, are as follows: mouth of Illinois on the Mississippi, 40 miles above St. Louis; mouth of Wabash on the Ohio, 130 miles from the Mississippi; Cincinnati, on the Ohio, 550 miles from Mississippi; Portsmouth, on the Ohio, 589 miles from Mississippi; mouth of the Hocking, on the Ohio, 756 miles from Mississippi; Marietta, on the Ohio, 783 miles from Mississippi; at mouth Little Beaver, on Ohio, 924 miles from Mississippi.

In addition to these numerous canals, there is a railroad in partial completion from St. Josephs, on Lake Michigan, to Detroit, 200 miles long. The Mad River and Erie road extends from Sandusky on the Lake to Dayton, Ohio. The connection of this road with the Little Miami at Springfield, completes the line from Cincinnati to Sandusky.

The great *Erie Canal* connects Buffalo on Lake Erie with Albany on the Hudson, and is 363 miles long, etc., etc. There are several branches. The branch from Syracuse to Oswego on Lake Ontario; the Black River Canal; the Champlain Canal, to Whitehall at the head of Lake Champlain, 65 miles long. Thus is the Hudson River at Albany connected by this canal and its tributaries, with Lakes Erie, Ontario, and Champlain. The canal also connects with the Atlantic by the Chenango Canal from Utica to the Susquehanna, and thence by Pennsylvania canals, or from Rochester, by the Genessee Valley Canal, to the head of boat navigation on the Alleghany River, and thence to the Mississippi.

From Montezuma, on the Erie Canal, 205 miles west of Albany, there is a connection with Philadelphia by the Seneca Lake and Canal, Chemung Canal, Williamsport Railroad 73 miles, Susquehanna Canal, Harrisburg, etc., Railroads, 107 miles. Total distance, 360 miles.

From the Erie Canal at Montezuma, there is a connection with Baltimore by the Cayuga Lake, by the Ithica and Oswego Railroad, by the river Susquehanna, thence by railroad or water, etc., to Baltimore.

A railroad is now in operation from Buffalo to Albany, from Albany to Boston, and also to New York.

The Philadelphia and Pittsburgh Railroad connects the Atlantic with the Ohio, and of course with the Lakes. It consists of

The Columbia Railroad to Harrisburg on Susquehanna,....	82	miles.
Center Division Pennsylvania Canal,....................	172	"
Railroad from Hollidaysburg to Johnstown,...............	36	"
Western Division Pennsylvania Canal,...................	104	"
Total,..	394	"

In reference to the application of the commercial means of the Lakes to the purposes of defense, Col. Albert calculates the present commercial marine of the upper Lakes, is adequate to supply, without injury to the commerce of a state of war, as an auxiliary to a national fleet, means of transporting ten thousand men and all their supplies—means of creating, at short notice, ten heavily armed steamers, and of furnishing 1500 mariners. Though in cases of emergency, the whole commercial marine of the upper Lakes could be made tributary to their defense.

In regard to the lower Lakes, or those below the Falls of Niagara, it may be remarked that the British have greatly the preponderance on Lake Ontario, our mariners there being 1,300 available for war, four heavily armed steamers, and 15,000 tons shipping. On Champlain, however, the American power is supreme. The dimensions of the Welland Canal are not such as will admit the naval supremacy of the British on Ontario to be felt on the upper Lakes. Their force is as follows, compared with ours:

BRITISH MARINE ON LAKE ONTARIO.

57	steamers, averaging	200	tons.
6	lake propellers	300	"
7	river "	75	"
2	ships averaging	500	"
6	brigantines, "	150	"
94	schooners, "	150	"
300	barges, "	40	"
30	small craft, "	20	"

AMERICAN MARINE, LAKE ONTARIO.

8	steamers. averaging	277	tons.
10	propellers, "	275	"
204	sailing vessels, averaging	114	"

By means of locking the St. Lawrence, heavy armed steamers can be passed into the Lake from Montreal; and although the Welland Canal will not admit large armed vessels, every supply from the St. Lawrence may be dispatched to the upper Lakes through it.

The entire line of Lake coast is about 5,000 miles, 2,000 miles of which are the coast of a foreign power.

CAPACITY OF LAKES.

	Length.	Greatest Width.	Average Width.
Lake Champlain,	105	12	8
Lake Ontario,	180	52	40
Lake Erie,	240	57	38
Lake St. Clair,	18	25	12
Lake Huron,	270	105	70
Lake Michigan,	340	83	58
Lake Superior,	420	135	100

In the greatest width of Lake Huron, is not included the extensive Bay of Georgian, 120 miles long, and 45 miles wide on the average.

These lakes are connected throughout. *Champlain* with *Ontario* by the river Richelieu, the lock and dam navigation of St. Lawrence, the river Ottowa, the Rideau Canal through Canada, and the Champlain and Erie Canals of New York. *Ontario* is connected with *Erie* by Welland Canal and Oswego and Erie Canals, through New York; *Erie* with *St. Clair* by navigable and deep Strait of Detroit; *St. Clair* with *Huron* by navigable Strait of St. Clair; *Huron* with *Michigan* by Strait of Mankinaw, and with *Superior* by Strait of St. Mary. Somo slight obstructions remain to be removed.

LAKE CHAMPLAIN lies almost exclusively in New York and Vermont, and Government has been at most expense upon the harbors of Burlington and Plattsburg.

LAKE ONTARIO. Its ports are Sackett's Harbor, used in the last war as a naval depot; Port Ontario, Oswego, Little Sodus Bay, Big Sodus, Harbor of Genessee, Oak Orchard, etc., being nine good harbors, all requiring, however, work of improvement. "The whole of this coast being a southern coast, is exposed to the violence of the prevailing northern winds, and in consequence requires whatever protection it can obtain."

LAKE ERIE. On the New York coast of this Lake are Black Rock, Buffalo, Cattaraugus, Dunkirk and Portland Harbors. Buffalo is the greatest of all, and has a commerce of $60,000,000 or $70.000,000. On the Pennsylvania coast is Erie Harbor, of great capacity, which caused it to be adopted in 1812, as a principal naval station. It is now the principal place of outfit for naval vessels, and winter quarters. The Ohio coast of Erie includes Conneaut, Ashtabula, Grand River, Cleveland, Black River, Vermillion, Huron, Cunningham Creek, Sandusky Bay, of which Cleveland and Sandusky are the most important in point of trade, and are rapidly advancing. The Michigan coast includes Monroe and Toledo, which last, though used by Michigan, is in the State of Ohio. Upon all of these harbors, works have been in progress by the Government.

LAKE MICHIGAN has 320 miles of coast in Wisconsin, 560 miles in Michigan, 40 miles in Indiana, and 60 miles in Illinois. There are three good harbors in Michigan; one in Indiana, Michigan City; three in Illinois, of which Chicago is chief; several in Wisconsin, of which Milwaukie is most important. Besides all this coast, there are several hundred miles of coast, of which but little is known, and which is known as the upper peninsula of the State of Michigan.

With these remarks we dismiss the subject, regretting that the most clear and explicit information has in so few instances been obtained; and with a confiding hope, that the labors begun by Mr. Burke, the late Commissioner of Patents, in collecting the statistics of our internal trade, will be continued by the *Home* Department, and that the States themselves will soon establish *Bureaus of Statistics* in connection with their several governments. As we obtain information from time to time upon these subjects, it shall be furnished to our readers.

ART. II.—SLAVERY AT THE SOUTH.

INTRODUCTION; THE SLAVE TRADE, AND FUTILE ATTEMPTS TO ABOLISH IT; PRESCRIPTIVE RIGHT; SLAVERY IN THE ABSTRACT; IN ITS MORAL AND RELIGIOUS ASPECT; IN ITS POLITICAL INFLUENCES, AS AFFECTING PUBLIC ORDER, AND THE SAFETY AND POWER OF THE STATE.

[Letters of Governor Hammond to Thomas Clarkson.—We have often been persuaded to republish in our Review, the admirable and unanswerable letters of Gov. Hammond upon the slavery question. These letters have been inquired after very much of late in the South-west, where with difficulty a copy could be obtained. Regarding them as one of the most forcible exhibitions of the question in every possible point of view, we think it desirable that they be preserved in a permanent form, and be bound in with the volumes of our Review, in which, as far as possible, we desire to combine everything shedding light upon our institutions. Besides, as our circulation is now extending to the North and North-west, an opportunity will be afforded for our friends there to read and reflect upon the other side of the question, In either case, good must be effected, and we most earnestly press upon all southerners a reperusal of the letters.

Before long we shall present some new and striking information upon the negro and his relations to the white man, etc., from the pen of a learned friend, who has given years to the investigation of the subject. We have also prepared some interesting statistics of slavery, slave products, slave territories, etc., sufficient for one or two articles, which will appear shortly, and we think contribute much to the proper understanding of the whole matter. The South should be prepared upon all these points.

To those desirous of investigation we commend the following among other authorities: British Cyclopædia—slavery; Encyclopædia Americana, slavery, with the authorities there cited; Dr. Cartwright and Dr. Nott, in Southern Quarterly and Commercial Reviews; Chancellor Harper's Address; Rev. T. Thornton's Inquiry, 1 vol.; Paulding & Carey on Slavery; Argument R. J. Walker in Slaughter vs. Groves; Esle's Defense of Negro Slavery; Blair's Roman Slavery; Fuller and Wayland's Discussion on Slavery, etc.—Ed.]

Sir—I received, a short time ago, a letter from the Rev. Willoughby M. Dickinson, dated at your residence, "Playford Hall, near Ipswich, 26th Nov., 1844." in which was inclosed a copy of your circular letter addressed to professing Christians in our northern States, having no concern with slavery, and to others there. I presume that Mr. Dickinson's letter was written with your knowledge, and the document inclosed with your consent and approbation. I therefore feel that there is no impropriety in my addressing my reply directly to yourself, especially as there is nothing in Mr. Dickinson's communication, requiring serious notice. Having abundant leisure, it will be a recreation to devote a portion of it to an examination and free discussion of the question of slavery as it exists in our southern States; and since you have thrown down the gauntlet to me, I do not hesitate to take it up.

Familiar as you have been with the discussions of this subject in all its aspects, and under all the excitements it has occasioned for sixty years past, I may not be able to present much that will be new to you. Nor ought I to indulge the hope of materially affecting the opinions you have so long cherished, and so zealously promulgated. Still, time and experience have developed facts, constantly furnishing fresh tests to opinions formed sixty years since, and continually placing this great question in points of view, which could scarcely occur to the most consummate intellect even a quarter of a century ago; and which may not have occurred yet to those whose previous convictions, prejudices and habits of thought, have thoroughly and permanently biassed them to one fixed way of looking at the matter; while there are peculiarities in the operation of every social system, and special local as well as moral causes materially affecting it, which no one, placed at the distance you are from us, can fully comprehend or properly appreciate. Besides, it may be, possibly, a novelty to you to encounter one who conscientiously believes the domestic slavery of these States to be not only an inexorable necessity for the present, but a moral and humane institution, productive of the greatest political and social advantages, and who is disposed, as I am, to defend it on these grounds.

I do not propose, however, to defend the African Slave Trade. That is no longer a question. Doubtless great evils arise from it as it has been, and is now conducted: unnecessary wars and cruel kidnapping in Africa; the most shocking barbarities in the Middle Passage; and perhaps a less humane system of slavery in countries continually supplied with fresh laborers at a cheap rate. The evils of it, however, it may be fairly presumed, are greatly exaggerated. And if I might judge of the truth of transactions stated as occurring in this trade, by that of those reported as transpiring among us, I should not hesitate to say, that a large proportion of the stories in circulation are unfounded, and most of the remainder highly colored.

On the passage of the act of Parliament prohibiting this trade to British subjects, rests what you esteem the glory of your life. It required twenty years of arduous agitation, and the intervening extraordinary political events, to convince your countrymen, and among the rest your pious king, of the expediency of the measure: and it is but just to say, that no one individual rendered more essential service to the cause than you did. In reflecting on the subject, you cannot but often ask yourself, what after all has been accomplished; how much human suffering has been averted; how many human beings have been rescued from transatlantic slavery? And on the answers you can give these questions, must in a great measure, I presume, depend the happiness of your life. In framing them, how frequently must you be reminded of the remark of Mr. Grosvenor, in one of the early debates upon the subject, which I believe you have yourself recorded, "that he had twenty objections to the abolition of the slave trade: the first was, *that it was impossible*—the rest he need not give." Can you say to yourself, or to the world, that this *first* objection of Mr. Grosvenor has been yet confuted? It was estimated at the commencement of your agitation in 1787, that forty-five thousand Africans were annually transported to America and the West Indies. And the mortality of the Middle Passage, computed by some at five, is now admitted not to have exceeded nine per cent. Notwithstanding your act of Parliament—the previous abolition by the United States, and that all the powers in the world have subsequently prohibited this trade (some of the greatest of them declaring it piracy, and covering the African seas with armed vessels to prevent it)—Sir Thomas Fowel Buxton, a coadjutor of yours, declared in 1840, that the number of Africans now annually sold into slavery beyond the sea, amounts, at the very least, to one hundred and fifty thousand souls; while the mortality of the Middle Passage has increased, in consequence of the measures taken to suppress the trade, to twenty-five or thirty per cent. And of the one hundred and fifty thousand slaves who have been captured and liberated by British men-of-war since the passage of your act, Judge Jay, an American abolitionist, asserts that one hundred thousand, or two-thirds, have perished between their capture and liberation. Does it not really seem that Mr. Grosvenor was a prophet? That though nearly all the "impossibilities" of 1787 have vanished, and become as familiar *facts* as our household customs, under the magic influence of steam, cotton and universal peace, yet this wonderful prophecy still stands, defying time and the energy and genius of mankind. Thousands of valuable lives and fifty millions of pounds sterling have been thrown away by your government in fruitless attempts to overturn it. I hope you have not lived too long for your own happiness, though you have been thus spared to see that in spite of all your toils and those of your fellow-laborers, and the accomplishment of all that human agency could do, the African slave trade has increased three-fold under your own eyes—more rapidly, perhaps, than any other ancient branch of commerce—and that your efforts to suppress it have effected *nothing more* than a three-fold increase of its horrors. There is a God who rules this world—all powerful—far-seeing: He does not permit His creatures to foil His designs. It is He who, for his allwise, though to us often inscrutable purposes, throws "impossibilities" in the way of our fondest hopes and most strenuous exertions. Can you doubt this?

Experience having settled the point, that this trade *cannot be abolished by the use of force*, and that blockading squadrons serve only to make it more profitable and more cruel; I am surprised that the attempt is persisted in, unless it serves as a cloak to other purposes. It would be far better than it now is, for the African, if the trade was free from all restrictions, and left to the mitigation and decay which time and competition would surely bring about. If kidnapping, both secrectly and by war made for the purpose, could be by any means prevented in Africa, the next greatest blessing you could bestow upon that country would be to transport its actual slaves in comfortable vessels across the Atlantic. Though they might be perpetual bondsmen, still, they would emerge from darkness into light—from barbarism to civilization—from idolatry to Christianity—in short, from death to life.

But let us leave the African slave trade, which has so signally defeated the *philanthropy* of the world, and turn to American slavery to which you have now directed our attention, and against which a crusade has been preached as enthusiastic and ferocious as that of Peter the Hermit—destined, I believe, to be about as successful. And here let me say, there is a vast difference between the two, though you may not acknowledge it. The wisdom of ages has concurred in the justice and expediency of establishing rights by prescriptive use, however tortuous in their origin they may have been. You would deem a man insane, whose keen sense of equity would lead him to denounce your right to the lands you hold, and which perhaps you inherited from a long line of ancestry, because your title was derived from a Saxon or Norman conqueror, and your lands were originally wrested by violence from the vanquished Britons. And so would the New England abolitionist regard any one who would insist that he should restore his farm to the descendants of the slaughtered red men to whom God had as clearly given it as he gave life and freedom to the kidnapped African. That time does not consecrate wrong, is a fallacy which all history exposes; and which the best and wisest men of all ages and professions of religious faith have practically denied. The means, therefore, whatever they may have been, by which the African race now in this county have been reduced to slavery, cannot affect us, since they are our property, as your land is yours, by inheritance or purchase and prescriptive right. You will say that man cannot hold *property in man.* The answer is, that he can and *actually does* hold property in his fellow all the world over, in a variety of forms, and *has always done so.* I will show presently his authority for doing it.

If you were to ask me whether I am an advocate of slavery in the abstract, I should probably answer, that I am not, according to my understanding of the question. I do not like to deal in abstractions. It seldom leads to any useful ends. There are few universal truths. I do not now remember any single moral truth universally acknowledged. We have no assurance that it is given to our finite understanding to comprehend abstract moral truth. Apart from the Revelation and the Inspired Writings, what ideas should we have even of God, salvation and immortality? Let the heathen answer. Justice itself is impalpable as an abstraction, and abstract liberty the merest phantasy that ever amused the imagination. This world was made for man, and man for the world as it is. Ourselves, our relations with one another and with all matter, are real, not ideal. I might say that I am no more in favor of slavery in the abstract, than I am of poverty, disease, deformity, idiocy, or any other inequality in the condition of the human family; that I love perfection, and I think I should enjoy a millenium such as God has promised. But what would it amount to? A pledge that I would join you to set about eradicating those apparently inevitable evils of our nature, in equalizing the condition of all mankind, consummating the perfection of our race, and introducing the Millenium? By no means. To effect these things belongs exclusively to a higher power. And it would be well for us to leave the Almighty to perfect His own works, and fulfill His own covenants. Especially, as the history of the past shows how entirely futile all human efforts have proved, when made for the purpose of aiding Him in carrying out even his revealed designs, and how invariably he has accomplished them by unconscious instruments, and in the face of human expectation. Nay, more, that every attempt which has been made by fallible man to extort from the world obedience to his "abstract" notions of right and wrong, has been invariably attended with calamities, dire and extended, just in proportion to the breadth and vigor of the movement. On slavery in the abstract, then, it would not be amiss to have as little as possible to say. Let us contemplate it as it is. And thus contemplating it, the first question we have to ask ourselves is, whether it is contrary to the will of God, as revealed to us in His Holy Scriptures—the only certain means given us to ascertain His will. If it is, then slavery is a sin. And I admit at once, that every man is bound to set his face against it, and to emancipate his slaves should he hold any.

Let us open these Holy Scriptures. In the twentieth chapter of Exodus, seventeenth verse, I find the following words: "Thou shalt not covet thy neighbor's house, thou shalt not covet thy neighbor's wife, nor his man-servant, nor his maid-servant, nor his ox, nor his ass, nor anything that is thy neighbor's"—which is the tenth of those commandments that declare the essential principles of the Great Moral Law delivered to Moses by God himself. Now, discarding all technical and verbal quibbling as wholly unworthy to be used in interpreting the Word of God, what is the plain meaning, undoubted intent, and true spirit of this commandment? Does it not emphatically and explicitly forbid you to disturb your neighbor in the enjoyment of his property; and more especially of that which is here specifically mentioned as being lawfully and by this commandment made sacredly his? Prominent in the catalogue, stands "his man-servant and his maid-servant," who are thus distinctly *consecrated as his property* and guaranteed to him for his exclusive benefit in the most solemn manner. You attempt to avert the otherwise irresistible conclusion, that slavery was thus ordained by God, by declaring that the word "slave" is not used here, and is not to be found in the Bible. And I have seen many learned dissertations on this point from Abolition pens. It is well known that both the Hebrew and Greek words translated "servant" in the Scriptures, mean also and most usually "slave." The use of the one word instead of the other, was a mere matter of taste with the translators of the Bible, as it has been with all the commentators and religious writers, the latter of whom have, I believe, for the most part, adopted the term "slave," or used both terms indiscriminately. If, then, these Hebrew and Greek words include the idea of both systems of servitude, the conditional and unconditional, they should, as the major includes the minor proposition, be always translated "slaves," unless the sense of the whole text forbids it. The real question, then, is, what idea is intended to be conveyed by the words used in the commandment quoted? And it is clear to my mind, that as no limitation is affixed to them, and the express intention was to secure to mankind the peaceful enjoyment of every species of property, that the terms "men-servants and maid-servants" include all classes of servants, and establish a lawful, exclusive and indefeasible interest equally in the "Hebrew brother who shall go out in the seventh year," and "yearly hired servant," and "those purchased from the Heathen round about," who were to be "bondmen forever," *as the property of their fellow man.*

You cannot deny that there were among the Hebrews "bondmen forever." You cannot deny that God especially authorized his chosen people to purchase "bondmen forever" from the Heathen, as recorded in the *twenty fifth chapter of Leviticus*, and that they are there designated by the very Hebrew word used in the tenth commandment. Nor can you deny that a "BONDMAN FOREVER" is a "SLAVE": yet you endeavor to hang an argument of immortal consequence upon the wretched subterfuge, that the precise word "slave" is not to be found in the *translation* of the Bible. As if the translators were canonical expounders of the Holy Scriptures, and *their words*, not *God's meaning*, must be regarded as His revelation.

It is vain to look to Christ or any of his Apostles, to justify such blasphemous perversions of the word of God. Although slavery in its most revolting form was everywhere visible around them, no visionary tions of piety or philanthropy ever tempted them to gainsay the LAW, en to mitigate the cruel severity of the existing system. On the contrary, garding slavery as an *established*, as well as *inevitable condition of uman society*, they never hinted at such a thing as its termination on arth, any more than that "the poor may cease out of the land," which God affirms to Moses shall never be: and they exhort "all servants under the yoke" to "count their masters as worthy of all honor": "to obey them in all things according to the flesh; not with eye-service as men-pleasers, but in singleness of heart fearing God;" "not only the good and gentle, but also the froward"; for what glory is it, if, when ye are buffeted for your faults, ye shall take it patiently: but if, when ye do well and suffer for it, ye take it patiently, this is acceptable to God." St. Paul actually apprehended a runaway slave and sent him to his master! Instead of deriving from the Gospel any sanction for the work you have undertaken, it would be difficult to imagine sentiments and conduct more strikingly in contrast, than those of the Apostles and Abolitionists.

It is imposible, therefore, to suppose that slavery is contrary to the will of God. It is equally absurd to say that American slavery differs in form or principle from that of the chosen People. *We accept the Bible terms as the definition of our slavery, and its precepts as the guide of our conduct.* We desire nothing more. Even the right to "buffet," which is esteemed so shocking, finds its express license in the Gospel. 1 *Peter ii*, 20. Nay, what is more, God directs the Hebrews to "bore holes in the ears of their brothers" to *mark* them, when under certain circumstances they become *perpetual slaves. Exodus xxi*, 6.

I think, then, I may safely conclude, and I firmly believe, that American slavery is not only not a sin, but especially commanded by God through Moses, and approved by Christ through his Apostles. And here I might close its defense; for what God ordains and Christ sanctifies, should surely command the respect and toleration of man. But I fear there has grown up, in our time, a transcendental religion, which is throwing even transcendental philosophy into the shade—a religion too pure and elevated for the Bible—which seeks to erect among men a higher standard of morals than the Almighty hasrevealed or our Savior preached; and which is probably destined to do more to impede the extension of God's kingdom on earth than all the infidels who have ever lived. Error is error. It is as dangerous to deviate to the right hand as to the left. And when men, professing to be holy men, and who are, by numbers so regarded, declare those things to be sinful which our Creator has expressly authorized and instituted, they do more to destroy His authority among mankind, than the most wicked can effect by proclaiming that to be innocent which He has forbidden. To this self-righteous and self-exalted class belong all the abolitionists whose writings I have read. With them, it is no end of the argument to prove your propositions by the texts of the Bible, interpreted according to its plain and palpable meaning, and as understood by all mankind for three thousand years before their time. They are more ingenious at construing and interpolating to accommodate it to their new-fangled and etherial code of morals, than ever were Voltaire or Hume in picking it to pieces to free the world from what they considered a delusion. When the Abolitionists proclaim "man-stealing" to be a sin, and show me that it is so written down by God, I admit them to be right, and shudder at the idea of such a crime. But when I show them that to hold "bondmen forever" is ordained by God, *they deny the Bible, and set up in its place a law of their own making*. I must then cease to reason with them on this branch of the question. Our religion differs as widely as our manners. The great Judge, in our day of final account, must decide between us.

Turning from our considerations of slave-holding in its relations to man as an accountable being, let us examine it in its influence on his political and social state. Though, being foreigners to us, you are in no wise entitled to interfere with the civil institutions of this country, it has become quite common for your countrymen to decry slavery as an enormous political evil to us, and even to declare that our Northern States ought to withdraw from the Confederacy rather than continue to be contaminated by it. The American Abolitionists appear to concur fully in these sentiments, and a portion at least of them are incessantly threatening to dissolve the Union. Nor should I be at all surprised if they succeed. It would not be difficult, in my opinion, to conjecture which region, the North or South, would suffer most by such an event. For one, I should not object, by any means, to cast my lot in a confederacy of States, whose citizens might all be slaveholders.

I indorse, without reserve, the much-abused sentiment of Governor McDuffie, that "slavery is the corner-stone of our Republican edifice"; while I repudiate as ridiculously absurd, that much lauded but nowhere accredited dogma of Mr. Jefferson, "that all men are born equal." No society has ever yet existed, and I have already incidentally quoted the highest authority to show that none ever will exist, without a natural variety of classes. The most marked of these must, in a country like ours, be the rich and the poor, the educated and the ignorant. It will scarcely be disputed that the very poor have less leisure to prepare themselves for a proper discharge of public duties than the rich; and that the ignorant are wholly unfit for them at all. In all countries save ours, these two classes, or the poor rather, who are presumed to be necessarily ignorant, are by law expressly excluded from all participation in the management of public affairs. In a republican Government this cannot be done. Universal suffrage, though not essential in theory, seems to be in fact a necessary appendage to a republican system. Where universal suffrage obtains, it is obvious that the government is in the hands of a numerical majority; and it is hardly necessary to say, that in every part of the world more than half the people are ignorant and poor. Though no one can look upon poverty as a crime, and we do not generally here regard it as any objection to a man in his individual capacity; still, it must be admitted that it is a wretched and insecure government which is administered by its most ignorant citizens, and those who have the least at stake under it. Though intelligence and wealth have great influence here as everywhere, in keeping in check reckless and unenlightened numbers, yet it is evident to close observers, if not to all, that these are rapidly usurping all power in the non-slaveholding States, and threaten a fearful crisis in republican institutions there at no remote period. In the slaveholding States, however, nearly one-half of the whole population, and those the poorest and the most ignorant, have no political influence whatever, because they are slaves Of the other half a large proportion are both educated and independent in their circumstances, while those who unfortunately are not so, being still elevated far above the mass, are higher toned and more deeply interested in preserving a stable and well ordered government, than the same class in any other country. Hence, slavery is truly the "corner-stone" and foundation of every well-designed and durable "republican edifice."

With us, every citizen is concerned in the maintenance of order, and in promoting honesty and industry among those of the lowest class who are our slaves; and our habitual vigilance renders standing armies, whether of soldiers or policemen, entirely unnecessary. Small guards in our cities, and occasional patrols in the country, insure us a repose and security known nowhere else. You cannot be ignorant that, excepting the United States, there is no country in the world whose existing government would be overturned in a month, but for its standing armies, maintained at an enormous and destructive cost to those whom they are destined to overawe—so rampant and combative is the spirit of discontent wherever nominal free labor prevails, with its ostensive privileges and its dismal servitude. Nor will it be long before the "*Free States*" of this Union will be compelled to introduce the same expensive machinery, to preserve order among their "free and equal" citizens. Already has Philadelphia organized a permanent battalion for this purpose; New York, Boston and Cincinnati, will soon follow her example; and then the smaller towns and densely populated counties. The intervention of their militia to repress violations of the peace is becoming a daily affair. A strong government, after some of the old fashions—though probably with a new name—sustained by the force of armed mercenaries, is the ultimate destiny of the non-slaveholding section of this Confederacy, and one which may not be very distant.

It is a great mistake to suppose, as is genereraly done abroad, that, in case of war, slavery would be a source of weakness. It did not weaken Rome, nor Athens nor Sparta, though their slaves were comparatively far more numerous than ours, of the same color, for the most part, with themselves, and large numbers of them familiar with the use of arms. I have no apprehension that our slaves would seize such an opportunity to revolt. The present generation of them, born among us, would never think of such a thing at any time, unless instigated to it by others. Against such instigations we are always on our guard. In time of war we should be more watchful and better prepared to put down insurrections than at any other periods. Should any foreign nation be so lost to every sentiment of civilized humanity as to attempt to erect among us the standard of revolt, or to invade us with Black Troops for the base and barbarous purpose of stirring up servile war, their efforts would be signally rebuked. Our slaves could not be easily seduced, nor would anything delight them more than to assist in stripping Cuffee of his regimentals to put him in the cotton-field, which would be the fate of most black invaders, without any very prolix form of "apprenticeship." If as I am satisfied would be the case, our slaves remained peacefully on our plantations, and cultivated them in time of war, under the superintendence of a limited number of our citizens, it is obvious that we could put forth more strength in such an emergency, at less sacrifice, than any other people of the same numbers. And thus we should in every point of view, "out of this nettle danger, pluck the flower safety."

How far slavery may be an advantage or disadvantage to those not owning slaves, yet united with us in political association, is a question for their sole consideration. It is true that our representation in Congress is increased by it. But so are our taxes; and the non slaveholding States, being the majority, divide among themselves far the greater portion of the amount levied by the Federal Government. And I doubt not that when it comes to a close calculation, they will not be slow in finding out that the balance of profit arising from the connection is vastly in their favor.

[*To be continued.*]

ART. III.—FLORIDA.

THE EVERGLADES OF FLORIDA, AND THE PROSPECT OF RECLAIMING THEM INTO GARDENS FOR EVERY VARIETY OF THE FRUITS OF THE TROPICS, &C.

We have, upon three occasions, presented to the readers of the Review elaborate sketches of Florida, historically and productively, in almost every interesting particular. Our first paper (vol. iv, 38 p.) was based upon the History by Dr. Monette, and the United States Census of 1840; the second (in the same volume, p. 245), upon the Report to Congress by Dr. Henry Perrine, and private information; the third was the able production of E. R. Fairbanks, Esq., one of the citizens of that State, and is the leading article of our fifth volume. These sketches have left little yet to be presented in regard to Florida that is truly instructive and valuable, except what we have been fortunate enough to find in a volume entitled "Everglades of the Peninsula of Florida," and for which the country is indebted mainly to the efforts of the Hon. J. D Westcott, jr., who has kindly furnished us a copy.

The volume contains first, a Report from the Committee on Public Lands, urging a donation, by government to the State of Florida, of the Everglades existing in the southern part of the peninsula, of immense extent, filled with islands and covered with a large sheet of water, on condition that they be drained and reclaimed. The committee present a letter from Mr. Walker, Secretary of the Treasury, approving the suggestion, and from the Commissioner of the Land Office, to the same effect. From this last, it appears that the whole area of the Everglades is about 7.800,000 acres of land and water, of which 4,300,000 are always inundated and incapable of reclamation, 1,000,000 acres only occasionally covered and of doubtful recovery—and the remaining 2,500,000 acres are considered inferior and for a great part valueless, although not inundated.

In the tract proposed to be ceded, lies the grant already made to Dr. Perrine of 23.000 acres, and the Alagon claim, under Spanish grant, covering two-thirds of the territory but not considered at all valid.

"The project of draining the Everglades," says the Commissioner, "if successful, may reclaim *for cultivation* within the limits of the proposed grant, about *one million of acres* of these lands now covered with water, some *continually*, and the residue occasionally only. It cannot be expected to *reclaim* but a part of the Everglades: a part of the Atscenahoofa, or big cypress swamp, a part of the Halpatiokee swamp, and the skirt of poor lands on the margin of the glades, covered with water some months in every year, and which is very barren. Much of the *subaqueous* lands will still remain inundated, and no one can expect that the parts that are so drained can all be made susceptible of cultivation."

The Bill before Congress makes the grant depend upon these conditions: 1. That the State shall, in two years, commence a series of drains and canals for draining purposes; for decreasing the waters of Lake Okeechobee, &c.; for draining the Everglades between that lake and the Atlantic and Gulf coast, so that, if practicable, a communication may be made by such canals for vessels between the Atlantic and Gulf waters, and the whole be completed in ten years. 2. That one thirty-sixth part of said lands be reserved for public school purposes for the inhabitants thereof. 3. That Government shall have alternate sections of such lands south of the line as have been completely surveyed, &c.

The most important point, however, in the conditions of transfer, is that the surplus of the lands embraced, after defraying all expenses, etc., of reclaiming, shall constitute a perpetual fund for educational purposes, etc. Of this feature we express our warm approval.

The proposed donation to Florida resembles, very much, that which was made to Louisiana, at the last Congress, of a vast body of swamp lands, several millions of acres, supposed to be within the power of recovery without great expense, and to be very valuable for agricultural purposes when so reclaimed. Doubtless, immediate steps will be taken by the Legislature of the State in the premises; and we desire an opportunity of expressing here our ardent hope that the educational feature of the Florida act will be imitated, and that a large tract of the reclaimed lands—one half-million acres, at least—will be reserved forever. The proceeds of this *land fund* will suffice for SCHOOL and UNIVERSITY purposes. The Legislature of Louisiana will then have an opportunity of endowing, in a manner becoming of the noble institution that was in contemplation of the Convention which framed our present Constitution, and which was to be located in the city of New Orleans. It can make this UNIVERSITY one of the proudest and most distinguished seats of learning in America, and thronged with students from half the Confederacy—from the neighboring Islands and Mexico, if this scheme be but carried out, and that, too, *without one cent of expense to the State.* The grant from Government is a pure gratuity, and it becomes a liberal people like ours to use it for such elevated purposes. Without such endowment, the University must degenerate into a mere grammar school, which its literary and scientific departments are now in great danger of doing, despite of the handsome structures that have been erected, and are in progress. An endowment of one-half or one-quarter million, perhaps, acres of the reclaimed lands would produce an annual revenue of $10,000, the least cost at which a splendid institution can be sustained, including halls, observatories, libraries, cabinets, apparatus. and needy scholars, of whom any number may be instructed *free*. *Louisiana* would have just reason to be proud of such an institution in her great city.*

But to return to Florida, Mr. Buckingham Smith, who was employed by Government, in 1847, to "make a *reconnoissance* of the Everglades, &c.," makes a report, from which we digest many important particulars. It appears that there is a faint tradition the Spaniards contemplated more than a century ago the draining of the Everglades, and actually undertook it, and some of the works, it is supposed, were discovered in the late Indian war. During the British possession of Florida, De Brahm, an experienced engineer, made surveys of the eastern coast, and some of his maps, notes, &c., are in the collections of Peter Force, Esq., at Washington, and many others among the papers lately brought over from England by Massachusetts.

The Everglades extend from the southern margin of Lake Okeechobee some ninety miles to Cape Sable. the southern extremity of the peninsula of Florida, and are in width from thirty to fifty miles. Their waters are fresh, and are in depth from one to six feet. Lake Okeechobee is a large body of water, thirty miles in diameter, and subject to continual overflow. The geology of the southern portion of the peninsula comprises oolitic lime rock, filled with shells and corals, porous, easy of excavation, and on exposure to the air hardens and becomes useful for building purposes. It contributes to the fertility of the soil. Along the eastern verge of the glades are spots of wet and black prairie land, and also between them and the sea. Other spots are covered with pine trees, imbedded in a dark soil of vegetable mold. Dry hammocks exist, too, with various descriptions of trees. These lands would all be valuable.

To reclaim the Everglades and the neighboring swamps, it is proposed to tap the Lake Okeechobee by canals, etc., as its waters are supposed to be elevated at least twelve feet above the waters which shal furnish an outlet and a reservoir, and the whole expense at the highest figure is put down about $500.000.

"Whatever may be," says Mr. Smith, "the latent and dormant resources of this region; however great the capability of its being advantageously improved, and however valuable it may be made by the enterprize, energy and industry of the American agriculturist, if encouraged, or even given a fair chance, by the Government; vet, hitherto, no proper opportunity has been offered for the development of those resources and capabilities. Whilst in the possession of the savages; even when under the dominion of the Spaniards, who possessed little agricultural enterprise, and whose attention was directed elsewhere; during the short period it was in the hands of the English, suffering not merely from neglect. but pressed down by the most iniquitous policy; from its discovery by Ponce de Leon to the present day, with but brief exceptions, the theater of savage war. and bloodshed and desolation; in the eighty years preceding its acquisition by the United States, twice changing masters, owners, inhabitants and policy; for some time, the resort of the rovers of the sea, or the little less scrupulous cruisers of the many different flags which the revolutions of the present century occasioned; and, when acquired by the United States, assigned as a kind of prison bounds for the Seminoles they failed to remove or subdue, it would have been wondrous, indeed, had it become more important, in any respect, than it is now generally regarded."

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*The reader will refer to the last or preceding number of our Review, where we originally proposed this educational movement.

The action of Government has not been favorably felt in the settlement of South Florida, and the whole number of whites on the peninsula now, below the northern part of the Everglades, does not exceed fifty. At Key West there are about 2000, and occasional settlements on other Keys.

During the Florida War, the butcheries of the Indians, the murder of Government officers and of Dr. Perrine, drove nearly all the settlers to Key West; and the location since, of some of the Indians in the peninsula, is calculated to deter settlement for a long time.

The Government has commenced at Key West and the Tortugas extensive fortifications for the protection of the vast commerce of the country passing in that quarter, and to give us the command of the Gulf, the straits of Florida, and perhaps, eventually, by our navy, of the Caribbean sea. A numerous population in the vicinity of these fortifications, is much to be desired; and they would, from the character of the country, resort to the seas and the fisheries, and become in the event, a nursery of southern seamen. Such a population, it is said, would diminish the dangers of vessels passing along the straits and navigating the Gulf, and prevent losses in property, which are now more than one million of dollars per annum: since more extensive and accurate knowledge would thereby be generally acquired of the reefs and coasts and of their continued changes; and the superior facility of obtaining pilots and other aid, that would be afforded by such settlements, would be valuable safe-guards.

The fisheries of Florida, too, would be promoted, which within the last fifteen years have become of some consequence, and are valued at about $15.000 annually. The British have ever eagerly sought a participation in these fisheries for the Bahamians. The salt resources of the Islands and Keys are equal to the demands of the whole Union.

The Everglades are thus described by Mr. Smith:

"Imagine a vast lake of fresh water extending in every direction, from shore to shore, beyond the reach of human vision—ordinarily unruffled by a ripple on its surface—studded with thousands of islands, of various sizes, from one-fourth of an acre to hundreds of acres in area, and which are generally covered with dense thickets of shrubberry and vines. Occasionally an island is found with lofty pines and palmettos upon it, but oftener they are without any; and not unusually a solitary, majestic palmetto is seen, the only tree upon an island, as if to guide in approaching it, or as a place of signal or look-out for its former denizens. The surrounding waters, except in places that at first seem like channel ways (but which are not), are covered with tall saw-grass, shooting up its straight and slender stems from the shallow bottom of the lake, to the height, often, of ten feet above the surface, and covering all, but a few rods around, from your view. The water is pure and limpid, and almost imperceptibly moves, not in partial currents, but, as it seems, in a mass, silently and slowly to the southward. The bottom of the lake, at the distance of from three to six feet, is covered with a deposit of decayed vegetable substance, the accumulated product of ages, generally two or three feet in depth, on the white sand and rock that underlies it, over the entire surface of the basin. The flexible grass, bending gently to the breeze, protects the water from its influence. Lilies and other aquatic flowers of every variety and hue, are to be seen on every side, in pleasant contrast with the pale green of the saw-grass; and, as you draw near an island, the beauty of the scene is increased by the rich foliage and blooming flowers of the wild myrtle and the honey-suckle, and other shrubs and vines that generally adorn its shores. The profound and wild solitudes of the place—the solemn silence that pervades it, unless broken by the splashing of a paddle of the canoe or light batteau, with which only can you traverse the Pahayokee, or by the voices of your "compagnous du voyage," add to a wakened and excited curiosity, feelings bordering on awe. No human being, civilized or savage, inhabits the secluded interior of the glades. The Seminoles reside in the region between them and the Gulf. Except for an occasional flight of an eagle or a bittern, startled by the strange invaders of their privacy, or for a view of the fishes in the shallow waters, gliding swiftly from your boat as it goes near to them, your eyes would not rest on a living thing, abiding in this wilderness of "grass-waters," shrubbery and flowers Reflections upon the past history of the regions around you, unbidden, force themselves upon the visitor to the interior of the glades. On these islands, in ages that have long since passed away, the haughty and ferocious Carib cacique dwelt.

"He and his people were driven from their homes by more powerful people, who were, in turn, expelled by stronger foes. Here the daring and reckless Buccaneer, of later times, came, after his cruise for plunder, to revel in safety upon his unhallowed spoils. Once in this secluded spot, the Catholic missionary pursued the heavenly vocation of teaching the benighted pagan the truths of the Gospel; and here he sealed his devotion to his God by yielding up his life to the vengeance of the infidel savage. Part of these glades are now in the allotted district of the wily and intrepid Arpiarka, the chief of those of his tribe that fought so fiercely and so obstinately in resisting the enforcement of the policy of the Federal Government of removing them west, and who finally succeeded in constraining the United States to abandon that policy, and to allow them to remain still longer on the hunting grounds, and near the graves, of their fathers. The recollection, also, that the sacred name of "Laguna del Espirita Santo" was given to this region by the Spanish discovers is not without influence upon the visitor. The effects of such a visit to the Pahayokee upon a person of romantic imagination, and who indulges his fancies on such subjects, it may be presumed, would be somewhat poetic. But if the visitor is a man of practical, utilitarian turn of thought, the first and the abiding impression, is the utter worthlessness to civilized man, in its present condition, for any useful or practical object, of the entire region. A solitary inducement cannot now be offered to a decent whiteman to settle in the interior of the Everglades! Some of the islands may be fertile, but their inaccessibilty, except by small boats, and the entire isolation from society their residents would have to encounter, would deter most men (who did not desire to avoid his fellows either from misanthropy, or fear of justice for crimes committed) from making the glades their homestead."

Whether the Everglades can ever be adapted to the culture of sugar, rice, tobacco, cotton or corn, is undetermined. although many think that they can. Tropical fruits may, however, be cultivated, and the reclaimed swamps will possess advantages for any of the above products. The work of draining would reclaim also the lands for a hundred miles on the Kissime river, and those to the north-westward of the lake. We agree. therefore, with Mr Smith: "The citizen, whether in executive or legislative station, or without either, who succeeds in making fit for cultivation, even if but partially, a region equal in extent to either of the three smallest States of this Confederacy, now as useless as the deserts of Africa. will earn a rich meed of praise from the people of Florida and of the Union. The Everglades are now suitable only for the haunt of noxious vermin, or the resort of pestilent reptiles. The statesmen whose exertions shall cause the millions of acres they contain, now worse than useless, to teem with the products of agricultural industry—to be changed into a garden, in which can be reared many and various exotics, introduced for the first time for cultivation in the United States—whether necessaries of life, or conveniences, or luxuries merely;—that man who thus adds to the resources, wealth and independence of his country—who contributes by such means to the comforts of his fellow men, will merit a high place in public favor, not only with his own generation, but with posterity."

The views of the same gentleman in regard to the action of Government in obtaining valuable seed, etc., we also indorse to the full. "It is proper, also, that I should advert in this report to a subject intimately connected with the favorable success of the primary undertaking of draining the Everglades and rendering them capable of being cultivated profitably. It is the adoption of necessary measures by the Federal Government for the procurement of exotic plants, seeds and roots, and such productions as can be reared there for the use of the settlers. Whilst the manufacturing, the commercial, the navagating, the mechanical, and in fine every other interest in society has been encouraged and fostered, by measures adopted with a view of affording them direct aid and protection, is it not astonishing that the agricultural interest of this country has been so entirely neglected. Excepting the limited assistance given by the Patent Office in the procurement and distribution of seeds, scarcely any attention has been bestowed upon this subject by statesmen of later years. The Federal Government, by means of the navy visiting foreign countries, through our ministers and consuls abroad, could obtain and distribute properly many trees, plants and other productions of the forest, field and garden, and introduce them for cultivation in those parts of the United States best adapted to them. It is not doubted that $10,000 per annum properly applied, and the plants, seeds, roots, etc., distributed among agriculturists and horticulturists, rather than theorists—and instead of placing them in nurseries and show gardens in cities, have them sent into the appropriate section of the country, would be a judicious measure. Hundreds of valuable productions from Cuba, West Indies, Mexico, Yucatan, Guatemala, South America, Spain, Portugal, Italy, Sicily, China, East Indies, Africa, now unknown to us, could be introduced and cultivated in South Florida, etc , etc.

In a letter of Col. James Gadsden of South Carolina, to Hon. R. I. Walker, he demonstrates the practicability of draining the glades, and conceives that it will open to the United States the only portion of her territory capable of competing with tropical latitudes in all those productions which enrich them. Gen. Jessup concurs in their views, and adds: The hammocks in this part of the country are all extremely rich, and would soon be converted into sugar plantations. The swamps are generally peat swamps, which, if drained, would be soon converted into olive, lime and orange plantations, and would be cultivated by a numerous white population, interposed between the free blacks of the West Indies and our slaves Gen. Harney, after some able views upon the matter, declares if it does succeed, in less than five years that region will have, no doubt a population of one hundred thousand souls and more. Our coast in South Florida is now extremely exposed in time of war.

This population would protect it and afford security to the whole commerce of the western country passing along its shores. There are other letters from distinguished officers of the Topographical Engineers, the Army and Navy, to the same effect. Mr. Sewall, who entered the St Lucie river from the sea, speaks of the settlers there as engaged in the culture of tropical plants, and the turtle fishery. They are endeavoring to get in pine-apple plants, and many were already matured. He saw the cocoa-nut, guava, lemon, lime, orange, banana, tamarind, etc. Sisal hemp is found wild. Sugar cane matures and tassels like corn, a yard long.

A Committee of the Legislature of Florida say: "The United States pay to the West Indies, to South America, to the Azores, to Portugal, and other tropical countries, a large amount annually for their products. South Florida is the only part of the United States where such products can be raised. With the exception of coffee, tobacco, sugar, tea, black pepper, it is believed, with proper encouragement, an amount equal to the entire amount imported into the United States would be raised in South Florida." The arrow root produced is equally as nutritious as that of Jamaica or Bermuda. In 1844. 25,000 lbs. were made in South Florida for shipment. Millions of pounds could be annually produced.

The following in regard to the FISHERIES of FLORIDA, is taken from a report to its Legislature:

> "Upward of twenty eastern vessels from thirty to sixty tons burthen, with from five to fifteen men each, are now employed in these fisheries. Several vessels owned by resident citizens of Florida are engaged in them. These vessels supply the markets of Havana and Cuba, generally, with not only fresh fish and roes, but also dried and salted fish to an immense amount. The annual amount paid in Cuba to these fishing vessels, it is believed, exceeds $150,000. The retailing of fresh fish in the market is a monopoly sold for a large amount by the Spanish government there. Those who possess the monopoly receive, it is believed thrice the amount they pay the fishing vessels At present few dried or salt fish are taken from Florida to New Orleans for the western country market or to the northern Atlantic cities, as the profits of the Cuba market are much greater, and because those now employed in those fisheries are not more than sufficient to supply that market. It is anticipated, if properly regulated, hundreds of thousands of dollars of such fish could be sold advantageously throughout the whole Union."

WRECKS ON THE FLORIDA COAST.

	Value vessels and cargo.	Salvage of Court.	Expense.
1844,...............	$ 725,000	$ 67,626 76	$169,064 99
1845,...............	737,000	69 591 99	105.709 51
1846,...............	1,624,000	108,992 00	213,423 00

To the pamphlet on Florida, Mr. Westcott has made a concluding note, which we regard important enough to copy. "It is not a little surprising that, in twenty-seven years since Florida has been held by the United States, no complete nautical survey of the Florida reef has been made. During such time the *British* government has had ships of war, among them the Bustard, engaged for months in such surveys; and even in surveying the harbor of Key West, and other of our harbors there! The charts used by our navigators are the old Spanish charts and those made by the British from 763 1784, and of the recent British surveys alluded to, and compilations of them by Blount and others, all imperfect in many particulars, and erroneous in others. *We have no original American chart of all the reefs and keys.* That accomplished and scientific officer at the head of the coast survey, Professor Bache, has informed me, that if the means were appropriated by Congress, the entire reef and all the keys, from Tortugas up to Cape Sable, could be surveyed *in one season.* The expense, to enable the work to be finished in one season, might not fall short of $100,000, as to effect it, three or four parties of officers must be employed. But the benefits of such work would greatly outweigh this amount, and it will not cost less to devote two or three years to it."

ART. IV.—THE NORTH AND THE SOUTH.

SOUTHERN POPULATION AND ITS RELATIVE ADVANTAGES; PAUPERISM AND CRIME AT THE NORTH AND SOUTH; EDUCATION AND LETTERS IN THE TWO SECTIONS; RIGHTS OF THE SOUTH; SLAVERY.*

But it is objected that the northern States are more populous, and, that if the average wealth of their individual citizens is less, the aggregate wealth of the State is greater. This, however, is of no consequence to the argument. The aggregate wealth of Ireland is no doubt greater than that of any of our States, as her population is so much greater. And yet her people die by thousands of starvation. I am considering the condition of our people, as affected by their respective institutions and pursuits. And I think this is the great point in which patriotism and philanthrophy and philosophy are concerned.

But it is asserted that the system of the South is depopulating; that the people of Virginia are deserting her; that the population of Kentucky is almost stationary; and that the whole southern section is but thinly settled, and promises to remain so. If it be meant by all this, that southern modes of living are incompatible with a dense population, I admit it, and rejoice in it. So far as the concentration of people in towns and cities is concerned, I have endeavored to show that such a thing is not so much to be desired. Nor do I think it expedient to promote the augmentation of numbers within the territorial limits of a State, by a minute subdivision of farms and plantations among a multitude of proprietors or tenants. Such is too much the tendency in the free States and in other countries; and it has been found fatal to agricultural improvement. It has resulted in France, in reducing the average size of farms to an area of three or four acres, held under their laws of descent by distinct proprietors. And in a part of Scotland, and in ireland, tracts of a similar size are held by separate tenants. And it is precisely among the peasantry of France, the croftiers of Scotland, and the cottiers of Ireland, that stagnation and desolation have overspread the land, and semi-barbarism and starvation the people. The division of land for cultivation into very small tracts, is destruction of its value. The soil of France is, on an average, of unusual fertility, and its climate so genial as to be favorable to a great variety of productions. Yet there, with a dense population of its own, and in the neighborhood of Great Britain, with its mighty cities, the greatest market in the world, the average value of land is only five or six dollars per acre—is less than in Virginia. In England the average size of tracts held by the several sorts of tenure, is about 150 acres, which is about as small as can be made profitable—as small as is compatible with the due rotation of crops, a judicious variety of stock, and the prompt adoption of improvements in culture and utensils. In France, the owner of a three or four acre farm, worth only twenty-five dollars, cannot of course afford to buy an improved plow—much less can the renter of such a tract in Ireland. It would cost more than the whole crop is worth. Accordingly a large proportion of French and Irish tillage is performed with the spade, at a great expense of manual labor; and accordingly, it is in England chiefly where the tracts are large, that the modern improvements in agriculture have been made—and there the soil is more productive and profitable. That some Virginians, instead of adopting some of the new methods of preserving and restoring the fertility of their lands, choose to emigrate to new States, where the soil is already rich by nature, and is cheap, results from a mere calculation and comparison of the cost of the two systems. And if it be found more profitable to remove to a new, than to renovate an old soil, it is an evidence of thrift, rather than poverty in the emigrant. And of this, the superiority of the new south-western over the new north-western States, which will appear by a comparison of their property and population is ample proof.[*]

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* Concluded from September Number.

But the impression exists that the population of the South as a section is really stationary, or is declining. And this being assumed, it is regarded as evidence that the people of the South are migrating, either from dissatisfaction with its institutions or with its progress and prospects, or that the vices peculiar to its system are unfavorable to the increase of its population—or that all these combine to depopulate her.

But all this is a mistake. If we deduct from the free States the foreign emigration and its offspring, the residue representing the native population, does not indicate so great a natural increase, as the present number of people in the southern States.

Of the foreign emigrants, no register was kept until 1820. From that year until 1840, it amounted to more than 700,000 persons, accord-

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[*] In the Kentucky Auditor's report of 1848, we find a table (No. 16) of the distribution of property in that State, which indicates a degree of wealth, and of its equitable allotment, which may challenge any community for comparison.

Without property,	7,436	parents,
With less than $100 worth,	12,964	"
" from $100 to $400,	12,344	"
" $400 to $600,	5,000	"
" over $600,	28,791	"

It has been alleged, that in the South there are only about 300,000 slaveholders. Well, supposing each adult slave-holder to have an average family of six, the slave-holding population of the South would amount to 1,800,000, which is probably as large a proportion as the land-holding population of the North.

ing to the returns. But large numbers came by the way of Canada, for which, during a considerable period, the facilities were greater than by the direct route. These have been estimated at half the number registered in the customhouse. Assuming, however, the whole number to be a million, which is the lowest estimate I have seen, their natural increase in the twenty years could not have been less than half a million—making 1,500,000. Now the white population of 1840, in the free States, was 9,557,431; deducting 1,500,000 it would be 8,057,431. In 1820, it was 5,033,983, and has consequently had a natural increase of 60 per cent.

The white population of the South was, in 1820, 2,833,585, and is now 4,635,637, which exhibits a natural increase of 65 per cent. I have included all the foreign emigration in the North. A little of it, however, has gone to the South; but not more than the excess of southern people who have removed to the north-western States *

This evidence of the great natural increase of southern white population, is an answer to another imputation against it, very current at the North. It has been held that slavery is a degradation of labor; that, therefore, the white people of the South refuse to work, and live in idleness; and that from idleness they become dissipated, vicious, and violent. But vice is fatal to the increase of population. It destroys constitutional vigor, diminishes the number of children, and afflicts the few that are born, with hereditary infirmity and premature death. One fact is disclosed by the census which is very significant on this point. There is an excess among the white people of the South of 132,072 males. Among those of the North, only 178,275. This is about 97,000 less than the proportion the North ought to have, to equal the South. But when we consider that the foreign population settles almost exclusively in the northern States, and contains much more than its proportion of males, it is apparent that the deficit of the North in male population is much larger. Now the vices of civilized society affect males chiefly, young men and boys far more than any other. And if it were true that the South is more immoral than the North, it would appear in the deficit of male population. But the reverse seems to be the fact.

The explanation of this result is to be found in the same circumstances that determine the relative wealth of the two sections. The South is rural in residence and habits. It does not present the temptation or the opportunity for sensual gratification to be found in city life. It is to cities that the passions and appetites resort for their carnival. The theater, the gaming house, the drinking house, and places of still more abandoned character abound in them, and to these the dissipated youth goes forth at night from home, along the high road to ruin. In the family of the southern planter or farmer, although wine may be drank and cards played, all is done at home under parental and femi-

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* It has been suggested that the emigrant population arrive poor, and, therefore, when included in the average of individual wealth in the North, reduces its rates. But the foreigner is generally adult if he is poor: and, therefore, acquires wealth more easily than the native. If, however the emigrant population be stricken out of the estimate, and the whole property of the North divided among the natives, their proportion will yet be far below that of the South.

nine observation, and therefore excess can never go so far. Of course the sons of planters visit the cities, but those in their neighborhood are trivial in size, and meagre in attractions—those more distant are the more seldom seen. The ancient poets, who thought that the lower regions were the abode of great and good men, as well as bad, located the entrance in a remote and solitary place. Thus Homer conducts Ulysses on this visit to the shades of his brother warrior Greeks, to a thinly settled country of dark-skinned people.

> "When, lo! we reached old Ocean's utmost bounds,
> Where rocks control his waves with ever-during mounds:
> There, in a lonely land and gloomy cells,
> The dusky nation of Cimmeria dwells."

There he found the portals of the infernal world. So Virgil conducts Æneas to the somber and solemn forest of the Cumean sybil. But with our improved conceptions of the character of that place and its inmates, and the most direct avenues to approach it, the modern epic poet who desires to give his hero a view of it, will have to fix the gateway in the heart of a great city, where the vices hold their revels. 'T is there

> "The gates of Hell are open night and day,
> Smooth the descent and easy is the way."

It cannot be said that the excessive mortality among the males of the North, is owing to their unwholesome employments. For the females are employed in similar or more destructive avocations. In Massachusetts about fifty thousand women work in factories, and yet in that State there is an excess of 7,672 females, whereas, if the natural proportion of the sexes existed among the native population, or such as is found at the South, Massachusetts ought to have an excess of twenty-two thousand males. So that at present she has about thirty thousand females beyond the due proportion. It is true that Massachusetts loses a portion of her male population by emigration to the West, although she is re-inforced again by the excess of males in the foreign emigrants that have settled there. But there still remains a large portion who must have perished by the sickness and vices of the towns and cities that contain so large a part of her people—Boston alone, with its suburb towns, having a population of 200,000 or nearly one-third of all the State. So, then, the operation of the institutions of this model State of the North, is to violate the laws of nature by a separation of the sexes; to send thousands of her sons away from their happy condition at home, to encounter the hardships of the West; to send multitudes of others to die by dissipation in her cities, and to place her lonely and deserted women, not in convents, but in factories. I have said that there are about fifty thousand women employed in the factories of Massachusetts. Such is the testimony of the official census of the State in 1845. Those who are thus employed, it is well known, are generally young, unmarried women, as such a vocation would be rather incompatible with the domestic duties of wives. Now, according to the census of 1840, there were but about 57,000 women in that State between the ages of 17 and 25. So that about seven-eighths of the marriageable women of Massachusetts, at a time of life that ought to be sacred to love and courtship, to pleasure and to hope, to home and to society, are sent forth from the parental roof, to labor for years, confined to over-heated rooms, containing a hundred persons each, confined to space of five feet square, for thirteen hours a day, under a male overseer, and not permitted to receive a visit from a lover or a relative in the mill, except by the permission of the proprietor's agent, or at the boarding house except by permission of the proprietor's housekeeper; for such are the regulations and condition of Lowell. This confinement to factories, postpones the marriage of the women of Massachusetts to an average of twenty-three or twenty-four years* I do not know at what age, precisely, marriages occur in Virginia, but the census shows that Virginia, with fewer adults, has 100.000 more of children.

In determining the condition of civilized communities, it is generally considered essential to inquire into the state of their pauperism; not only because the paupers themselves usually constitute a considerable class, but because their number affects vitally the condition of the entire laboring class.

In the State of New York, the progress of pauperism has been rapid. In 1830, the number supported or relieved was 15.506. In 1835 it was 38,362—according to Chapin's U. S. Gazetteer for 1844. In 1843 or 4, the number had increased to about 72,000 permanent. and the same number of occasional paupers, making a total of 144,000, as appears from the Journal of Commerce. These were for the whole State, and there was thus one pauper to every seventeen inhabitants. In 1847, there were received at the principal almshouses for the city of New York, 28.692 persons, and *out-door* relief was given, out of public funds, to 44,572 persons, making a total of 73,264. So that about *one person out of every five* in the city of New York, was dependent more or less on public charity. The total cost, that year, of this pauperism, was $319,298.88,* For this present year of 1849, the estimate is $400,000, according to the mayor's message.

In Massachusetts, it appears by the returns. that there were in 1836, 5,580 paupers, and in 1848, 18,693. These were all in the almshouses. Those relieved out of the almshouses were 9,817, making a total of 28,510. according to the report of the Secretary of State of Massachusetts. And the returns from 41 towns are omitted. If allowance be made for these, it will be seen that in Massachusetts, one person out of every twenty, is a constant or occasional pauper. It thus appears that in these two States pauperism is advancing ten times as rapidly as their wealth or population. It has become so great as to include large numbers of able-bodied men, who, it appears, cannot, or, what is worse, will not, earn a subsistence; and if such be the case, what must be the condition of the great mass of people, hanging on the verge of pauperism, but withheld by an honorable pride, from applying for public charity.

Now, throughout the greater part of Virginia and Kentucky, pauperism is almost unknown I passed some time ago, the poorhouse of Campbell county, Kentucky. on the opposite side of the river. and there was not a solitary inmate. And I have known a populous county in Virginia to have but one.

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* American Almanac.

It has generally been supposed that the paupers of Massachusetts and New York are principally foreign emigrants. But this is a mistake. In the 5,580 paupers of Massachusetts in 1836, only 1,192 were of foreign birth—but little over one-fifth, which does not probably exceed the proportion, then, of that population in the State. In 1845, of 1,016 persons admitted into the almshouses of Boston, 490 were foreign, of whom 382 were Irish; but that was the year of Irish famine. In 1848, of 18,993 paupers received into the almshouses of Massachusetts, 7,413 were foreigners.* We do not know what proportion of the people of that State are foreigners; in Boston there is about one-third.

When pauperism extends to the class that are able to labor, it is evident that the wages of labor are reduced to the cost of subsistence. And hence the whole class must be subjected to the melancholy and terrible necessity of working, rather to avoid the poorhouse, than of bettering their condition. And the pauper in an almshouse is a slave. He works under a master, and receives nothing but a subsistence. And there are already in New York and Massachusetts, about one hundred thousaud persons in this condition; about an equal number occasionally so, and they are increasing at the rate of 200 per cent., while the whole population does not increase 20 per cent. in ten years. In Cincinnati the number of paupers, permanent and occasional, already amounts to 2,000.

Whilst the property of the North is thus compelled to contribute to the support of this great and growing burden, and the labor of the North must not only assist in its support also, but must work in competition with it, they are subjected to another mighty evil, which springs from, or at least is aggravated by, the same causes, and that is crime.

The number of convicts in the three penitentiaries of New York, Auburn, Sing Sing, and Blackwell's Island, is about two thousand. In the penitentiary of Virginia there are only 111 whites, 89 blacks This indicates four times the amount of crime in proportion to the white population in New York as in Virginia. In Massachusetts there were, in 1847, 288 persons in the State prison, which indicates more than twice the crime in that State as in Virginia. Taking all the New England States together, their penitentiary convicts are twice as numerous in proportion to population, as in Virginia, as will be seen by consulting the American Almanac for 1849. It contains sketches of the criminal statistics of the several States, and is New England authority. In Ohio there are 470 persons in the penitentiary—in Kentucky 130. Ohio being 25 per cent. the most, according to population. According to the returns of the Kentucky penitentiary, one-half of her convicts for the last ten years, came from the single county in which Louisville, her principal town, is located—and one-third of the whole number were born in free States. So much for the States of the North. agricultural, manufacturing and commercial. old and new, as compared with those of the South, in crime. The results are uniformly and largely in favor of the South.

If we turn to the official reports of crime in the great cities of the North, we behold a state of society exhibited, at which the mind is appalled. In Boston the number of persons annually arraigned for crime exceeds four thousand, and of this number about one-third are females. So that one person out of every fourteen males, and one out of every 28 females, is arrested annually for criminal offenses. There may be some who are arraigned more than once a year, but on the other hand, there must be many who escape detection altogether.

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* American Almanac, 1849.

In New York the proportion of crime is about the same, some eighteen thousand persons having been arrested there last year. Of these, it is said, six thousand were for drunkenness, twelve thousand were committed to the tombs for examination, of whom ten thousand were committed for trial. Of these, there were sentenced to the State prison 119 men and 17 women—to the penitentiary 700 men and 170 women—to the city prison 162 men and 67 women—total 981 men, 254 women; showing an amount of crime in a single city, greater than in all the southern States together. In the Kentucky penitentiary, there is not a single woman—in the Virginia, I believe there is none.

The enormous amount of crime in the eastern cities, which already rivals the depravity of those of Europe, has been ascribed to the multitude of European emigrants. But the returns do not sustain this plea. Of 7,009 persons in the jails and houses of correction in Massachusetts, in 1847, only 1,165 were natives of foreign countries. This is less than one-fourth of the whole number, and cannot vary materially from the proportions of foreign and native population in the State.*

While the South has been so much more secure than the North, in life and property, from individual crime, it has been at least equally exempt from social disturbance. The apprehensions of danger from the dissimilarity of its white and black population, have not been realized. The proportion of white and black remains as at first, about two to one. Even in Brazil, where this proportion is reversed, where there are two blacks to one white, tranquility has reigned for a quarter of a century. And it is remarkable that Brazil and the United States, the only two nations on this continent where African slavery prevails, are the only two who have succeeded in the establishment of stable and flourishing social and political institutions. In all the Spanish American States, where the attempt has been made to introduce political equality among distinct and dissimilar races, it has been followed by incessant insurrection, anarchy, poverty, vice and barbarism.

When the union between the North and South, under our present constitution was formed, the social, political, and economical operation of the institutions peculiar to each, were matters of theory and conjecture. We have now had the experience of half a century; and the result is before us in the facts I have presented, facts against which neither speculative philosophy, nor sectional prejudice, egotism, or fanaticism can prevail.

It will be observed I do not compare the whole people of the North with the whole population of the South. I am *now* comparing the whites only of both sections; it being the first object to ascertain the effects of their respective institutions on the whites of the two sections. I do not compare northern cities with southern—but the white people, rural and urban, together of one section with those of the other. I have referred more particularly to northern cities, because they contain so large, if not the largest, portion of northern population—and are the boast and characteristic of the northern system. I have also preferred to compare the old States of the sections, not only because they are similar in climate and productions, but because in them the effects of the two systems are more developed, and as has been contended to the great disadvantage of the South.

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* American Almanac, 1849.

There is a class of topics of a more intangible nature, but not the less important, and which are much insisted on in this controversy, that now remain to be briefly considered. It is urged that religion and education are more prevalent and flourishing in the North than in the South. It is true that the form of religion existing in New England, and by law established, was extremely strict and self-denying: as that of Virginia—the Episcopal—was then one of the most indulgent of Protestant sects. But it is well known that the Puritan character has been rapidly degenerating and passing away. Indeed the forms of that faith are no longer dominant in Boston, the ancient seat of its power, and in their place the Unitarians have prevailed, and they are gaining ground rapidly in New England. A change has occurred in Virginia, but a change in the opposite direction. Instead of the Episcopalians, the Baptists are predominant in Virginia. Thus, under the operation of their respective institutions, the religion of Massachusetts has receded from one of the most strict to one of the most relaxed systems of the Protestant faith—while Virginia has advanced from one of the most indulgent to one of the stricter forms of religious discipline. There are no means of ascertaining the number of members in all the churches in the several States. Virginia has about 80,000 of Baptists alone: she has 30,000 Methodists,* and a larger proportion yet of Episcopalians than any other State. Altogether she must have her full proportion.

But it is in education that the North claims the great preëminence over the South. In Massachusetts, according to the census of 1840, there were but 4,448 white persons above the age of twenty who could not read and write—and in Virginia there were 58,787. In Ohio there were 35,364, in Kentucky 40,016. In Illinois 27,502, in Mississippi 8,360. Thus it appears that, whilst there are more than twelve times as many illiterate persons in the oldest southern as in the oldest northern State, the proportion changes as we advance westward, until we find a greater proportion of them in a new State of the North than in one of the South. And thus it seems that, in the new States, where children are not educated at public expense, and where, therefore, their parents must provide for them, the children of the South are better educated; or rather, perhaps, it would seem, that the emigration from the North is much more ignorant than the South. Still, however, the odds of school instruction is decidedly with the North. This results from obvious causes. The territorial area of Virginia is probably nine times as great as that of Massachusetts. If, therefore, Virginia were disposed to adopt the common school system, it would require nine times the schoolhouses and teachers to afford the same conveniences for attending school that exist in Massachusetts. Virginia is a thinly-settled, agricultural

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[*] American Almanac.

State, intersected by several ranges of mountains. In many places there could not be found ten scholars in ten miles square. In such places a population might be able to live comfortably, but not to establish a school, or send their children abroad to boarding-schools. Hence there must be a considerable number without schools. In commercial and manufacturing States, or those of small farms and dense agricultural population, this evil is not so much felt.

But Virginia has a system of oral instruction which compensates for the want of schools, and that is her social intercourse. The social intercourse of the South is probably much greater than that of any people that ever existed. There is certainly nothing like the number of visits among the families of a city or even the same square in a city, as prevails in the country of the South. And these visits are not fashionable calls, but last for days and weeks—and they are the great resource of the South for instruction and amusement. It is true that persons are not taught at such places to read or write, but they are taught to think and converse. They are the occasions of interchanging opinions and diffusing intelligence; and to perform the duties, to enjoy the pleasures of such intercourse, to please, to shine, and to captivate, requires a degree of mental culture which no custom of the North so much demands. Accordingly the South exhibits the remarkable phenomenon of an agricultural people distinguished above all others of the present day by the elegance of their manners and the intellectual tone of their society.

The North excels in books. In history, she has Bancroft, and Prescott; in poetry, Bryant, Halleck and Whittier; in criticism, Everett and Channing. In Sculpture, she has produced a Powers. Her Franklin has drawn the lightning from heaven, and taught it to play harmlessly around our very hearths—her Morse has even given letters to lightning, and lightning to letters! The north excels in the arts and the physical sciences, in inventions and improvements. She excels in associative action, not merely for railroads and manufactures, but for literary, benevolent and religious objects. I do not desire to detract one iota from her exalted merits and high civilization. But in individual character and individual action, the South excels. For a warm heart and open hand, for sympathy of feeling, fidelity of friendship, and high sense of honor; for knowledge of the sublime mechanism of man, and reason and eloquence to delight, to instruct and to direct him, the South is superior; and when the North comes into action with the South, man to man, in council or in the field, the genius of the South has prevailed from the days of Jefferson to Calhoun, from Washington to Taylor. And it is to the solitude which the rural life of the South affords, so favorable to reflection; and it is to the elevated rural society of the South, so favorable for the study of human nature; that we must ascribe those qualities of persuasion and self-command by which her statesmen and captains have moved the public councils, and won so many a field.

The abolition of African slavery in the South has been urged for many years by a portion of northern people. And now its restriction to its present territorial limits is the avowed purpose of almost every northern State. The basis on which this policy rests is the assumption that slavery is sinful and unprofitable. The means now relied on to arrest its future progress is not the persuasion of the people of the slaveholding States, but the numerical power of the free States acting through the Federal Government. Suppose, now, the South had a majority of votes, and were to announce its determination to arrest the further progress of commerce and manufactures in consequence of their poverty, pauperism, crime and mortality, what would be the sentiment everywhere felt in the North? Why, one of indignation, scorn and resistance. Such does the South feel now!

When the North American colonies confederated for resistance to Great Britain, the territorial area of the southern portion of them was 648,202 square miles—that of the northern only 164,084, or about one-fourth as large. Virginia alone had, by royal charter, the whole north-western territory in her limits, and, during the war, had confirmed her title by the patriotism and valor of her own citizens—who rescued even Illinois from British power. But before the present constitution was formed, Virginia, with a magnanimity almost infatuated, had ceded to the Confederacy, for the formation of free States, the whole north-western territory now constituting the States of Ohio, Indiana, Illinois, Michigan and Wisconsin, containing 261,681 square miles, and making the territory of the free States rather more than that of the slaveholding. The object of this cession, and the ordinance of 1787, was to equalize the area of the two sections. The acquisition of Louisiana, in 1803, added 1,138,103 square miles to our territory, of which, by the Missouri compromise, the South obtained only 226,013 square miles, or about one-fifth—the other four-fifths, notwithstanding it came to us as a slaveholding province, were allotted to the North, which thus had acquired more than 700,000 square miles of territory over the South. Florida and Oregon were acquired by the treaty of 1819, by which the South got 59,268 square miles, and the North 341,463, making the North about 1,000,000 square miles the most. In 1845 Texas was annexed, which added only 325,520 square miles to the South, even if all Texas were included. In 1848, we obtained 526,078 square miles more in the territories of New Mexico and California. And now the North claims the whole of this also—and not only this but half of Texas besides, which would make the share of the North exceed that of the South nearly 1,500,000 square miles; a territory about equal in extent to the whole valley of the Mississippi, and leaving the South only about 810,812 square miles, while the North retains 2,097,124, or nearly three-fourths of the whole! And this, too, when the South contributed her full share of the men and money by which the whole territory was obtained. In the Revolutionary war, the South furnished an average of 16,714 men in each year, and the North 25,875, which nearly corresponds with their respective number of citizens, and that, too, although the war was waged chiefly against the large cities of the North—cities being, in war, the most tempting and the most vulnerable points of attack. In the war with Mexico, the South supplied two-thirds of the volunteers which constituted three-fourths of the entire force employed. The revenue by which these wars have been supported, the public debt paid, and the price for the territory furnished, has been raised chiefly by duties which have notoriously operated designedly and incidentally to promote the industry and capital of the North, and to oppress those of the South.

If, after all this, the South should submit to be plundered of her share of the territory now in dispute, when, as an agricultural people, she requires her full proportion, she would be recreant to her interests, her power, her right, her honor, and her fame—recreant to her history and her destiny.

One of the proposed objects of these northern reformers is to promote the prosperity of the South. I have shown that she wants none of their aid, and that there are at home thousands of criminals to reform and hundreds of thousands of paupers to be relieved, on whom their philanthropy may be exhausted.

Is it for the welfare of the slave they are contending? I hold it to be the duty even of him who undertakes to subvert the established order of things, to manifest at least as much respect for experience as experiment, and it so happens that the experience of emancipation has been ample and diversified.

In Hayti, the black, after exterminating the white population, remained independent and isolated, the exclusive architect of its own institutions and destiny. The result is that they have relapsed into pristine barbarism. The exports of Hayti amounted in 1789 to about twenty-five millions of dollars—they do not now amount to one-tenth of that sum. The Haytien contents himself with the cultivation of a few yams for a mere subsistence, and a mere hut for a dwelling. The blacks and mulattoes are at civil war, and yesterday's papers announced that an army of 20,000 men was advancing against the principal town, Port-au-Prince.

Another plan of emancipation is to send the liberated to Liberia. But besides the expense of such a system, which renders it impracticable, it is attended with the death of from one-fourth to one-half of the emigrants by the coast fever.

The third plan attempted is that by the British, in their West Indies; the plan of gradual abolition by apprenticeship and ultimate equality of black and white; and this also has failed. The exports of Jamaica have already, in the first ten years of the experiment, fallen one-half. The negroes refuse to work, even for high wages, beyond what is necessary for mere subsistence, the planters are bankrupt, plantations are already abandoned, and the island is hastening to the condition of Hayti.

The fourth plan of emancipation is that which has been going on with us. That of manumission by the will of the master, the freedman remaining with black and white, or seeking other States. This experiment has not succeeded. The emancipated slave does not appear to be willing to perform the amount of work necessary to enable him to compete successfully with the white laborer. In the State of New York, the Constitution conferred the right of suffrage on colored persons owning [illegible] worth of property. Yet in the city of New York, in 1845, out of [illegible] colored people there were only [illegible] voters; and notwithstanding their numbers are augmented by frequent manumissions and fugitive slaves, they do not increase so rapidly as the slave population, which is evidence that their condition is not so comfortable. It is also a curious fact that of 386,293 free persons of color in 1840, nearly half (183,766) preferred to remain in the slave States, where, certainly, as a class, they are treated with no peculiar favor. In Massachusetts, where so much sympathy is expressed for them, they cannot or will not live. There are less now of them in Boston than there was twenty years ago, and both in Virginia and Massachusetts there are ten times as many free colored people in the penitentiary as their proportion of the white population. Is it, then, for the sake of such emancipation as the West Indian, which results in idleness, barbarism, and civil war among the blacks, or for the Liberian, which exterminates, or the American, which subjects them to crime and want, that Philanthropy would undertake to overturn the unrivaled system of southern civilization.

But we are told that slavery is an evil. Well, so is war an evil, and so, perhaps, is government itself an evil, since it also is an abridgment of liberty. But one of the first objects of our of constitution is to provide for war—for the common defense. And the people of the United States prefer the evil of war to the greater evils of being plundered and subdued. They prefer the evil of government to the greater evil of anarchy. So the people of the South prefer slavery to the evils of a dense manufacturing and commercial population, which appear to be inevitable without it; and the black man may prefer the slavery of the South to the want, the crime, the barbarism and blood, which attend his race in all other countries. In the practical affairs of human life in its present state, choice of evils is frequently all that is in our power. Good and evil in fact become relative, and not positive, terms. And the necessity is recognized by the example of our Savior, who applied the extreme remedy of the lash to the money-changers who profaned the temple. It is consistent for a rigid sect like the Quakers to oppose slavery, because they proscribe and repudiate war and luxury and all other evils. And we may all hope for the time to come, when in the progress of Christianity, the evils of slavery in the South, and those of pauperism, crime and mortality in the North, will be greatly mitigated or abolished. But the North can now make no protest, because the luxurious system of northern civilization not only subjects the great mass of the people to unwonted labor and privation, but actually sacrifices in peace a greater amount of life than is usually expended by communities at war.

If then the welfare of neither white nor black in the South would be promoted by the restriction or abolition of slavery, would the prosperity of the North be advanced? The only thing of which the North complains on its own account, is the ratio of representation fixed by the Constitution, which gives the South a vote equal to three-fifths of the blacks. But on the other hand, in consequence of the existence of slavery in the South, the North has a monopoly of foreign emigration. This amounted as we have seen, from 1829 to 1840, to a million and a half, including its increase. In the previous thirty years it must have been, with its increase to this day, at least half a million more. Since 1840 it has amounted to a million besides. So that the North has the vote and the power of three millions of people against the political power which slavery now confers, and that is equivalent to a white population only of about two millions.

And furthermore, by the peculiar agricultural employment of southern industry and capital, the South is a customer and consumer of northern manufactures and commerce, and of north-western agriculture. Abolish slavery, and convert the South into a people of mechanics, artizans and merchants, and instead of being a customer she becomes a competitor of the other section. And if the march of pauperism, crime and mortality, of the North be so great now, what would it be then?

The condition of modern civilization is far more laborious and oppressive than the ancient. The seats of ancient science and the arts were in the mild climates of the Mediterranean shore, or in the south of Asia and Europe. And in America the ruins of her unrecorded civilization are to be found in Palenque and Copan, all in a similar climate. The genius of England has carried civilization to a more northern latitude, and that of America has extended it, if not higher in latitude, to a still more rigorous climate than that of England. The wants of such a climate are great and imperious. The cost of fuel alone in the city of New York, exceeds $16,000,000 annually. The clothing must be much warmer, the houses more substantial, the food more nourishing, and all more expensive than a milder climate. And this great augmentation of the burthens of civilized life, must be borne in the North by freemen, not as of old, by slaves. Hence have we seen the fearful struggle of northern labor for subsistence; notwithstanding the immense aid it has derived from modern machinery and invention. But take from that labor the custom, and subject it to the competition of the South, where so much less is required for subsistence, and that so much cheaper, and the result would be as ruinous to the present system of the North as to that of the South. These two great systems have grown up together. That of the North could not have so much expanded without a market in southern agriculture—nor could this have grown so great, but for the demand and supplies of the North. Together they have flourished—together they must falter and fall. To restrict, therefore, the territorial extension of the South, and by circumscribing its industry render it unprofitable, is to restrict and paralyze the prosperity of the North in all its departments. Together these institutions have marched harmoniously to that eminence and success which have won the prosperity of both at home, and extorted the admiration of the world abroad. If either should fall by the hand of the other, the crime would not only be fratricide—it would be suicide; and over the moldering ruins of both would deserve to be written the epitaph: Here were a people who disputed about the capacity of the African for liberty and civilization, and did not themselves possess the capacity to preserve their own.

ART. V.—EDUCATION FOR PRACTICAL LIFE.*

PROMINENT *importance should be given to Mathematical and Physical Science in every system of Education.*

The rudiments of mathematics may be taught in such a manner as to educate the intellectual faculties at as early an age as those of any other science. The idea of number is among the first which the mind conceives, and in supplying a symbol to express it (which may be done at a very tender age), this mental training is begun. The child must *observe* and *compare* these symbols before he can apprehend their meaning or pronounce their name. The difference in value of the same symbol, according to position, necessitates the same intellectual process as that by which the mind conceives a just discrimination between the varying conditions of any subject of inquiry before judgment, and this exercise has furnished, at the same time, the Alphabet of Arithmetic and of Logic.

As the student advances, this parallel training in English scholarship and mathematical science progresses with him. The whole art of reasoning, says Lavoisier, is but a language well arranged and algebra the most perfect. Nor has there ever been a *careful* student of its methods, who did not approve the sentiment. Its notation is at once simple and powerful, while the general construction of language follows in strict analogy with its laws. Symbols are combined to form words in the expressions which represent quantity, and these in sentences expressing equality or the contrary, in every degree. The rules of algebra are but so many deductions of reason, and its examples the illustrations of their truth.

The study of Geometry opens the widest field for this drill in the art of reasoning. The young student is assured at every step as he passes from judgment to judgment through the complete argument, and is guarded by habit against hasty deductions, while its accurate phraseology exhibits the most forcible illustrations of the compass of language. None can comprehend, in the fullness of their import, the simplest definitions of Geometry, without such an exercise in precision of expression as is met with nowhere else. The study of the mathematics, however abstract, tends to give a proper balance to the mind, in the cultivation of that power by means of which it is enabled to separate the qualities and attributes of objects, and to form the habit of classification. It is a mistake often made, to suppose this process unduly severe. It is natural to man as an intellectual being. Its office is clearly discerned in every mental act. Without it all knowledge is resolved into its original elements and confined to individual things. For, how shall we determine "the agreement or disagreement of our ideas," as Locke has it, in any valuable sense, without such an acquaintance with their attributes as this function, only, can give. Here imagination shapes her material for the splendid structures of the Arts, in Poetry, Painting, Music or Architecture, and from this source Memory derives that philosophical arrangement of facts which links them together by affiliation in kind, according to true and important relations.

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*Having been favored by our friend, Col. Francis W. Capers, President of the Military Institute of Kentucky, with the perusal of his able Introductory Address on taking the chair in that Institution, we appropriate from the manuscripts, which were not intended by him for print, the following pages. They will lose no interest with whatever class of readers.

Immediately connected with these faculties of abstraction and generalization, and, indeed, superinduced by them, is the power of analysis—reason's sense of vision in all the creative efforts of the intellect. It is true that no one field of research or of learning can appropriate their cultivation exclusively, but it is especially within the province of mathematical studies. There analysis is most rigid and the mental habit best secured. How important the acquisition! Pope says he *lisped* in numbers. Here was genius; but many a blotted manuscript attests the labor of a scrutinizing analysis upon the most admired performances of his maturer years. And Byron, the embodyment of genius—a bard whose soul was fire—wrote no stanza of his Childe Harold without interlineation. Why should genius feel such uncertainty in giving utterance to conceptions of power, but for the fact that the most exquisite sentiment, the sublimest imagery—the whole array of figurative language—are subjects of analysis equally with the most elaborate deductions of reason. Without it, grace, delicacy, splendor, have no fitness, no appreciable substance in the arts. Unchecked by this curb of criticism, Imagination cannot perform her perfect office, but strays *away from truth*, in pointless ramblings. Without it, the games of the Palæstra had furnished nothing to painting and sculpture—no ideal of beauty to the Greek—no such names to glory as those of a Phidias, a Zeuxis, or an Apelles.

In whatever cultivates this habit of analysis, we observe a suitable preparation for successful study in mental and natural science. Indeed these sciences owe to analysis whatever advance they have made beyond the merest initials of knowledge. It was the safety lamp of Bacon, by whose light the labyrinthal intricacies of the human intellect were explored, until successive charts supplied material for a classification of its functions and their positive description. By its light the inner caverns of the human heart are searched, the motives of action and the power of passion unmasked, that man may know himself.

If we look to the material world, how vast and sublime its achievements! By its aid, Astronomy escaped from the meshes of the Ptolemaic net, and rising in the majesty of simple truth, divested heaven's bright orbs of the dark mantle of magic and mystery with which Astrology had robed them, and revealed the single principle which binds the spheres in one harmonious system. We owe it to this power, that Geology abandoned the vain and often impious dogmas of the Cosmogonists, and by limiting her investigations to the crust of the earth, constructed a noble science upon the data which it furnishes.

But we are losing sight of the cause in tracing its effects. We refer them all to a proper mental developement and claim for mathematical studies, that they are peculiarly adapted to such training. It is not however in this view only, that they possess prime importance, as educational agents. The student who is thoroughly acquainted with algebra, geometry and the trigonometries, has the whole science of mechanical philosophy and astronomy within his grasp. Not in the profitless sense of a mere collection of phrases (profitless to practical life although they embody facts), but because of his power to apply their principles whenever pleasure or necessity demand. He is able to delineate the topography of a country and run its bounding lines. He appropriates mechanical agents in construction, with a confidence which experience does not weaken. The heavens become his familiar home. He names their constellations, but from *Reason*, to whose far-seeing eye they have provided points of observation, whence to descry the comet in the depths of infinite space—to mark the path of its progress across the orbit of the spheres, pronounce its name, or prophesy its periods.

Such information would fit a man for usefulness in society and compel the respect of his fellows, though he could not construe a Latin sentence or name the letters of the Greek.

Is he a lawyer? Apart from their influence upon his mind, the merits of a thousand cases depend upon the principles of mathematical and physical science. Is he a physician? How shall he hold with credit to himself, that position of eminence in his profession which every one should strive to attain—how shall he practice understandingly without this aid?

The skeleton of the human frame, "the perfect work of an unerring Engineer" (as Dr. Arnott expresses it), is the concentration of all the mechanical principles developed in nature about him. The human body alive, demands a knowledge of the laws of fluids for the comprehension of the circulation of the blood—knowledge of the laws of pneumatics, acoustics and optics, to understand the action of the lungs in respiration and in utterance, or the phenomena of sight and hearing; whilst chemistry, mineralogy and botany, are elements so essential in the science of medicine, that ignorance of their principles is *ruin*, without the office of the friendly label. Is he an agriculturist, a planter or farmer? They unfold the nature of his soil, and give the world's experience upon the quality of manures and their adaptation to the culture of his grain—the influence of climate and varying seasons upon the objects of his daily care and toil. And shall the clergyman, vested with the high ministrations of his holy office, neglect these sciences—when, without them, he cannot hope to conquer an infidel adversary or wrest from his hands the implements of specious argument with which *his* faith is assailed. No! Let him have them, and besides the power of stronger argument, his spirit shall catch a holier inspiration from a *juster* view of the majesty of his God whose Spirit moved on chaos, in the beginning, to create the heavens and the earth.

ART. VI.—EARLY DISCOVERIES OF THE MISSISSIPPI, ETC.

WASHINGTON CITY.

My Dear Sir—In reply to your inquiries, as to the progress of my History of Florida, Louisiana and Texas, I send you inclosed the proof-sheets of pages 352 and 353, containing the finale of Law's scheme, which will serve as a specimen of the typography and mechanical execution. In a note on page 352,* you

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* The following is the note:

Among the various means employed at this time to derive revenue from Louisiana, was the attempt to introduce the leaves of the Cassina, or Primus Glaber of Linnæus, into Europe, as a will see an account of one of the expedients employed to keep up the price of the India Company's shares, which you may, if you please, publish in your Review: it was no other than an attempt to introduce into Europe, as a substitute for tea and coffee, the leaves of the Cassina or Yoppon, a well known plant growing abundantly on the coasts of Louisiana, and other southern States. I hope to be able to finish the printing of the History, down to the American Revolution, by the beginning of the next year: this will form a complete work, in a volume of about 550 pages. It is nearly all written to the present day, but whether I shall print the remainder, or not, must depend on my health, and on other circumstances. The work was commenced by me six years ago, as a History of Texas; but I soon found that no satisfactory account of that country could be conveyed, without constant reference to what took place in Louisiana; and Louisiana was at first only a portion of Florida. It is, indeed, impossible to separate the early history of the countries bordering upon the northern sides of the Gulf of Mexico, or to understand any events of importance, occurring in one portion, without a knowledge of what took place in another, perhaps at a very distant period.

I flatter myself, that I shall be thus able to offer to the public a connected history of that most interesting division of our continent, from its first discovery; embracing the particulars of the expeditions and settlements of Europeans in those countries, and showing the effects produced upon their advancement in population and general prosperity, by the various disputes and agreements between the governments of the civilized nations, exercising dominion in the New World. Especial attention is devoted to those disputes, and to the treaties by which they were terminated, so far as they bear upon the subjects of the history. The progress of knowledge of the Geography of these countries, is also carefully traced; and accounts are given of expeditions for discovery and conquest, along the coast and through the interior, to which no allusion has hitherto been made, in any work in the English language; while new views, founded upon new facts, will appear, in illustration of the course of the expeditions already often described. Many new facts and views are presented on those points, affording data for the determination of several vexatious questions of territorial limits, which have from time to time agitated our country ever since the commencement of its national existence and still remain unsettled.

In order to show how imperfectly the early records, relating to that part of America, have been studied, I send you an extract from my work, containing the account of the *Second visit of the Spaniards, to the Mouth of the Mississippi*, made some time before the expedition of Hernando de Soto, who has been hitherto universally regarded, as the discoverer of the great river, and in commemoration of whose supposed discovery, an artist of much talent is now employed by our government in painting a picture, to adorn the halls of the national legislature. This extract you may also publish, if you wish, in your Commercial Review. Many other facts far more important will be established in my work with no less certainty, though equally at variance with what is now received without question as history.

I am most happy to see the success of your efforts, to have the local history of the various towns and parishes of your State written by those residing in them: I hope you will persevere in this, as it will render your Review a repository of valuable materials for history.

Mr. Balestier, our Consul at Singapore, whose letter on the cultivation of

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substitute for tea. These leaves, the produce of a small tree, bearing red berries, called Apalachine by the French, and Yappon by the English, were much used in decoction by the Indians on the whole coast of America, south of the Chesapeake, as a tonic and febrifuge; and they are universally employed in the same way, at the present time, in the lower parts of North Carolina. The leaves are gathered in the summer and dried, or rather parched over the fire, after which they are boiled, and the decoction, bitter and somewhat aromatic, is taken hot in the same quantity and manner as tea. A particular description of the plant and its use, with a colored engraving of it, may be found in "Catesby's Natural History of Carolina," vol. 2, page 57. It is also described by Charlevoix, in the account of the plants of Louisiana, attached to his Histoire de la Nouvelle France. "It began," says the learned and *spirituel* Jesuit, in his letters, "to acquire great reputation at Paris, at the time of my departure (1721): but that was a bad time for reputations and fortunes of all kinds; they passed away as rapidly as they were created."

sugar in the East Indies you published in April last, was here a short time since. He speaks in high terms of your Review, and says that your articles on the mode of cultivating sugar in Louisiana, have produced a great improvement in that branch of industry in the East Indies. Mr. B. is an excellent, enlightened and interesting man, and will be an acquisition to your society, should he visit New Orleans, as he proposes.

With my best wishes I am, sir, truly yours,

To J. D. B. DeBow, Esq., New Orleans. ROBERT GREENHOW.

SECOND VISIT OF THE SPANIARDS TO THE MOUTH OF THE MISSISSIPPI.

The mouth of the Mississippi, first discovered in 1519 by Alonzo de Pineda, who gave it the name of Rio del Espiritu Santo, as clearly proved in the History of Florida, Louisiana and Texas, from the official report of the voyage and the chart annexed to it, of which a facsimile is preserved. In the spring of that year, Panfilo de Narvaez landed with several hundred men on the shore of a bay, which was most probably the same now called Charlotte Harbor, on the south side of the peninsula of Florida, and thence they marched northward to a country called Apalache, which can be satisfactorily proved to have been the south-east portion of the State of Alabama. After remaining for some time suffering from want of food, and undeceived as to the hope of finding rich nations to be plundered, they built boats on a bay named by them Baia de Cavallos, in commemoration of the slaughter of their horses, which appears to have been the same now known as Choctahatchee Bay, communicating with Pensacola Bay on the west by Santa Rosa Sound. With their departure from this place begins the following extract from the History, for which the only authority is the narrative published by Alvan Nunez de Vaca, the treasurer of the expedition and one of the four survivors of the party engaged in it.

"From the place of embarkation the Spaniards pursued their voyage toward the west for seven days, before reaching the open Gulf, which they at length entered through a strait, between the mainland and an island—most probably through the entrance of the Bay of Pensacola, which is just ninety miles from the eastern extremity of the Bay of Chocta-hatchee. Thence they continued their navigation westward along the coast, suffering constantly from insufficiency of food, and often from thirst, as their horse-skin bottles proved useless; and they were obliged in many cases to have severe combats with the natives, in order to procure fresh water.

"Wending their way thus slowly along the coast, the Spaniards, at the end of a month, had reached a small cluster of islands near the mainland, where they were attacked by a numerous party of natives in canoes, who chased them during the whole day, and annoyed them considerably by vollies of stones and arrows. 'Thus,' writes Cabeza de Vaca in his narrative, 'we continued our voyage through that day [November 1st] until the hour of vespers; when, my boat being the foremost, I observed a point of land, beyond which was a very great river, and I halted at an islet off the point, to wait for the other boats. The governor [Narvaez], however, would not come up, but chose rather to remain in a bay very near, where were many small islands; and there we joined company, and *took up fresh water from the sea into which the* *river poured in a torrent.* As we had eaten our corn raw for too days, we landed upon the island to parch some; but finding no wood there, we agreed to go to the river beyond the point, *a league distant:* on going there, however, the current was so violent that we were entirely unable to enter, and were driven away from the land, notwithstanding all our efforts and labor to reach it.'

"The river here mentioned could have been no other than the Mississippi, the only stream flowing into the Mexican Gulf, or into any other sea from North America, the waters of which remain so pure and unmixed with those of the sea, as to be potable at the distance of a league from their outlet. This outlet had been already seen, in 1519, by Pineda, who represented it on his chart, under the name of Rio del Espiritu Santo; or the merit of discovering the greatest river of North America, if not of the whole world, should have been assigned to Panfilo de Narvaez and Cabeza de Vaca."

ART. VII.—DYKES AND LEVEES OF HOLLAND AND LOUISIANA.

GEOGRAPHICAL POSITION OF HOLLAND AND LOUISIANA CONTRASTED; SYSTEMS OF DRAINAGE, AND HYDRAULIC ADMINISTRATIONS; AMSTERDAM AND NEW ORLEANS; DRAINING MACHINES, COST AND EFFICACY; INDUSTRY OF HOLLAND, ETC.

THERE are but few parts of the old world which, for a Louisianian, can possess as much interest as Holland. A country mostly below the level to which the bordering sea rises during high tides; where the land is so wet and marshy that, even after the most skillful draining, no building can stand unless erected on piles; but which by a stupendous system of dykes and canals has contrived to conquer these natural disadvantages and to become one of the most prosperous in Europe, is not only calculated to attract the attention of all reflecting men, but is an appropriate subject for the study and imitation of those who inhabit regions somewhat similarly situated.

The resemblance between Holland and lower Louisiana is, at first sight, striking; but an attentive observer can soon perceive that the natural obstacles against which we have to contend here, are quite insignificant when compared with those that have been overcome by the Dutch. On entering the mouth of the Maese and ascending the river as far as Rotterdam, the main features of the lower Mississippi are strongly recalled to the mind: it is the same low-land and, with the exception of some sand-hills near the sea board, the same dead level. The marshy shores of the river, covered with small willows, represent our sand-bars; while the fields are protected from overflows by dykes constructed on the plan of our levees. The resemblance, however, goes no further, for there are no forests: the land having been originally too low to permit their natural growth; but in lieu of them the characteristic wind-mills are seen, and meadows covered with fine cattle and detached houses imbosomed in trees. The dykes, or dams as they are called, instead of being, as our levees, raised a few feet above the soil, are generally so high that they look, at a distance, like fortifications, erected to repel the attacks of a foreign enemy. The upper surface of the main dykes is wide enough to be used as roads, where two carriages can be driven abreast.

Holland is intersected by numerous gulfs, lakes and marshes; and the extent of the two last is continually increasing, either by inundations or by digging the peat which is the common fuel of the country. The largest of the gulfs, the Zuider Zee, is as extensive as one of the provinces. The lake or sea of Haarlem was formed by the accumulation of sand at the mouth of the Rhine, which backed up the water on the adjacent marshes. Several rivers, ranked amongst the greatest in Europe, pass through its territory and separating into numerous channels, form broad estuaries at their entrance into the ocean. Of the ten provinces into which the kingdom is divided, Guelderland, Utrecht and Overyssel have, comparatively, higher lands: the others are considered as the lowest inhabited parts of the world. A glance at the map will show that in Holland, the most prosperous of the provinces which has given its name to the whole kingdom, water occupies more space than land; and that land may be said to be artificial, for a part of it would be almost constantly covered with more than sixteen feet of water, if not protected against inundation by the most unceasing labor, aided by science and immense out-lays.

In that portion of the swamps and marshes behind the city of New Orleans, which the draining company has undertaken to reclaim, it has been ascertained, by accurate surveys and levels, that the lowest part of the swamp is one foot higher than the water of the Pontchartrain at low tide. The vast extent of marsh, trembling prairie and swamp, which stretches in every direction between the sea shore and our arable lands, is known to be, almost everywhere, higher than the usual level of the sea; and the cultivated part of the State is several feet above it, even during the greatest swells occasioned by storms and hurricanes.

The name of the province of Zealand (Zee, sea) shows that it is a land rescued from the ocean. It is said to be " more completely inclosed by and sunk below the level of the water than any other part of the kingdom. The mariner, in approaching, sees only the points of the spires, peeping above the immense dykes which defend them from inundation."

The Dutch have given the world a splendid exemplar of what men can achieve, even in the most unpropitious country, when to great perseverance and industry, they can add steady and economical habits. Placed so near the sea as they are, and at the entrance of large rivers by which the interior of the most improved States in Europe can be easily reached, their main exertions have been naturally directed to navigation and commerce, in both of which they have been eminently successful. Toward the end of the seventeenth century, when the shipping of Europe was estimated at about 2,000,000 tons, theirs was computed at 900,000, or nearly one-half of the whole. Mr. McCulloch is even of opinion that, at that time, the foreign commerce and navigation of Holland was greater than that of all Europe besides, " and yet," he observes, " the country which was then the seat of this vast commerce had no native produce to export, nor even a piece of timber for ship-building."

The natural growth of the commerce and navigation of rival nations, and various political causes which it is not the object of these notes to examine, have stripped Holland of a great portion of the commerce she once possessed. Her cities have generally sunk below their ancient population; her institutions for the diffusion of learning continue to be ample, but her universities are far from being now as famous as they formerly were; her productive industry is always astonishing when compared to the extent of the country and its original resources, but her manufactures have been greatly checked by the competition of the English. Yet the large accumulation of capital in the hands of her merchants and their commodious situation in the center of Europe, still secure to them an extensive trade. The Dutch seek to attain wealth rather by economy than by speculations, and the cash system is the basis of nearly all their transactions. As they can hardly expect more than two or three per cent. of net profit by any sort of undertaking carried on at home, they are tempted to vest their capital in other countries, and hundreds of millions are lent by them to foreigners. Notwithstanding all the unfavorable changes that have taken place within the last hundred years, there is still left in the country information, prosperity and wealth enough to show that Holland has been the favorite abode of freedom, industry, learning and the arts.

Cold and moisture are the two characteristics of the climate. Sudden changes in the temperature are of frequent occurrence, and fogs are often seen in summer as well as in winter. A summer day in Amsterdam looks very much like a mild winter day in New Orleans. In consequence of the humidity of the atmosphere, and the demand for animal food created by the vicinity of great centers of population, their culture is almost entirely connected with pasturage. The country is, as it were, an immense prairie, intersected by canals and traversed by rows and groups of trees. The breeding and fattening of cattle is one of the bases of their prosperity. Their oxen are of great size, sometimes weighing two thousand pounds; the cows, which are also large, are first rate milkers; but they might, as well as the oxen, be better shaped. The cows are only stalled during winter, and are then kept with the greatest care. Very little attention is paid to the improvement of the race, except as far as color is concerned. By means of that unwearied industry, which is shown by the Dutch in everything they undertake, they have obtained a breed of cattle, the body of which is pure white, while the fore parts as far as the shoulders, and the hind parts as far as the rump, are uniformly black or of some other dark color. A herd entirely composed of cattle of this kind, when seen grazing in a pasture, has a most singular appearance: they look as if they were wrapped up in sheets. Dutch butter enjoys a high reputation and their cheese is in good repute over all Europe.

The lands which are not used as meadows are mostly employed in the culture of tobacco, potatoes, wheat, flax and madder. This latter produce, the quality of which is superior to that of other countries, is the most important crop raised in Zealand, where it is said to yield large profits. It is also one of the principal exports of the city of Rotterdam.

The soil of the islands of Zealand and the greater part of Holland is alluvial, like that of Louisiana, and is much lower. If madder can be profitably raised there, could it not be cultivated still more successfully here? It has been advantageously tried in Ohio; where, according to the Patent Office Report of 1847, after being allowed four seasons' growth, it produced two thousand pounds per acre, valued at fifteen cents per pound. The gentleman who made the experiment thinks that the yield could be increased to three thousand pounds per acre, and that it is better to harvest the crop at the end of three years' growth, than to allow a longer period. Madder is a very hardy plant which has no favorite country; it is grown in the South of France, Italy, Asia Minor and India, as it is in Holland. It thrives best in river alluvium containing a large proportion of humus. The roots are usually dug, in Europe, at the end of three years; in Provence, however, the plant is often pulled in eighteen months, without injury to the quality; the quantity only is smaller. With our rich soil and warm atmosphere, might not the root be well matured in less than two years?

Horticulture is much attended to by the Dutch, and has attained such importance as to become a profitable branch of industry. Besides amply supplying their own markets with culinary vegetables, they are exported in large quantities to Norway and other districts, where their growth is prevented by the rigorous climate. Ornamental gardening is also well cultivated, especially in its floral department. The commercial flower-gardens of Haarlem have long been the most celebrated for bulbous-rooted flowers. The Dutch gardeners excel in the art of causing a great deal to grow in a very small space, and of accelerating the maturity of fruits by means of hot-beds, sashes, pits and hot-houses. They thus obtain what the country could not otherwise produce and can furnish in the midst of winter, whatever can stimulate or gratify the luxurious taste of epicures. Ripe grapes are said to have been sold, in the month of January, as high as sixteen dollars a pound; and they pride themselves on having supplied France with those that were used at the coronation of Charles X.

In lower Louisiana, pears, apples, cherries and several other fruits, cannot be produced: the trees, although they grow well, are unproductive. This is generally attributed to our low and wet soil; but the gardens in Holland, particularly those seen round Rotterdam, are several feet below the level of the canals, yet fruits of every kind are obtained there in as great abundance as in our northern States. Does not this show conclusively that our want of success is rather to be ascribed to the heat of our summers, than to any defect in our soil? We are placed at the entrance of the warm zone; many tropical plants can bear the open ground in our State, but most of them cannot endure our winters without the protection of a green house. The position of plants coming to us from a temperate climate is quite the reverse: to make them thrive, they are to be protected against the sultriness of our atmosphere. The selection of northern exposures and the exclusion of the heat by sheds or coverings, the erection of cold-plant habitations, intended to retain a colder atmosphere, would probably reach that end. We might then, by artificial means, differently employed, obtain here pears and cherries, as grapes are procured in England and Holland.

Amsterdam, the commercial capital of Holland, is situated in a marsh. The whole city, as indeed every house in the province, is built upon piles driven into the ground. For a common sized house, one hundred piles are required. The Stadt-house, formerly the town-hall, now a royal palace and one of the noblest structures in Europe, is built of freestone; it presents a square two hundred and eighty-two feet long and two hundred and thirty-five deep; its height is one hundred and sixteen feet, exclusive of the tower, which is sixty-seven feet. Thirteen thousand six hundred and ninety-five oaken piles are said to have been employed in forming its foundation. The Navy Hotel, which is entirely surrounded by water, is built on eighteen thousand piles. As no trees are to be found in the country, except those which have been planted, it is a common complaint that a house costs as much below as above ground. The houses are mostly of brick; stone, having to be imported, is considered too expensive for common use. The bricks are remarkably small: about half the size of ours. This is said to be rendered necessary by the large proportion of clay contained in the soil. The bricks, if made larger, could not be dried without breaking.

Extensive cellars are constructed under almost every house, and by the help of strong walls and good cement, are rendered as impervious and dry as any to be found in London or Paris. Books and papers can be kept in them without being affected by dampness. The use of the same means would, no doubt, produce the same results in New Orleans; where, if cellars could be generally constructed, houses would not only be rendered more spacious and convenient, but, what is perhaps still more important, part of the back buildings attached to them might be dispensed with: the yards could then be made larger, more open to a free circulation of air, and consequently more healthy.

Amsterdam stands at the point of confluence of the little river Amstel with the Y, an arm of the Gulf of Zuider Zee. The port, like that of New Orleans, is somewhat in the shape of a crescent. The city is surrounded by a wide semicircular ditch and regularly cut, in the interior, by four main canals which follow on a parallel line the curve of the exterior ditch. A large number of smaller canals divide the city into ninety-five islands, communicating by draw-bridges, and having sluices for the purpose of regulating the level of the water: those canals are for the most part bordered by fine trees and afford pleasant views. To some of the houses, and sometimes to every window of a house on the first floor, there is fixed a single or double looking-glass or reflector, by means of which a person in the room, sitting before the window, can see by reflection the whole length of the street, the passengers, the trees, the canal and the shipping.

The expenses incurred in keeping the sluices in order, and in clearing the canals and port of mud, are very heavy. The harbor is inconvenient, large ships being obliged to lighten before they can pass the Pampus or bar at the mouth of the Y, and the navigation of the Zuider Zee is also difficult. For the purpose of remedying this defect, a canal, capable of admitting the largest class of merchantmen, has been cut from the north side of the port of Amsterdam to Newdiep, opposite to the Texel, the only spot on the shores of Holland that has deep water. The length of the canal is about fifty miles; the breadth at the surface of the water is a hundred and twenty-five feet; the width at bottom thirty-six, the depth twenty-one. Its level, like that of the Dutch canals, generally, is that of the highest tides and it receives its supply of water from the sea. The only locks it requires are two at the extremities, but there are, besides, two sluices with flood gates in the intermediate space. It is crossed by eighteen draw-bridges. There is a broad towing path on each side, and it is wide enough to admit of two frigates passing. This canal was begun in 1819 and completed in 1825, at a cost of about $4,500,000; computing its magnitude by the cubic contents of its bed, it is believed to be the greatest in the world.

The innumerable canals with which Holland is intersected, form a most remarkable feature in her economical arrangements and a leading source of her prosperity. The country is so level and water so abundant, that they can be made without much exertion of art or skill. They connect every town and every village, and run through the streets of cities, enabling vessels to load and unload at the doors of the warehouses. By them the Dutch are continually journeying, and conveying commodities from the interior of the country to the rivers; by them also an immense inland trade is carried on between Holland and every part of France, Flanders and Germany. When frozen, they serve as highways, on which long journies are performed on skates, while heavy burdens are conveyed in carts and sledges. But it is not as the means of intercommunication only that they are useful: country seats are surrounded by canals of greater or less dimensions; neighboring farms have scarcely any other dividing lines, and fields have no other inclosures. Many of them are elevated several feet above the soil, to carry off the surplus water which would otherwise inundate it. It is through them that wet and boggy lands are drained and adapted to agricultural purposes; in time of war, they can and have been used in overflowing the country, to protect it against invasion.

On account of the difference in the level of the plains, canals and marshes with that of the seas and rivers, the system by which Holland has been reclaimed from the sea, is not easily understood. Statistics of her commerce, industry and resources, have been printed in every language and are within the reach of all, but the publications relative to the draining of her marshes have only been made in Dutch, and on that account are of no use to foreigners. A report made in 1843, by Mr. Gevers d'Endegeest, the president of the commissioners intrusted with the draining of the lake of Haarlem, has however been translated into French, and contains a synopsis of the method by which the boggy and sterile territory of Holland has been reclaimed and rendered productive. The following practical data have been derived partly from that valuable document and partly from personal observation. They may perhaps be considered as entitled to some attention, now that Congress, by an Act approved March, 1849, has granted to our State all the swamp and overflowed public lands situated within her limits, on condition of her constructing the levees and drains which are necessary to redeem and reclaim them.

Holland is, on the sea coast, protected in part from inundation by a series of sand-hills, raised by the continued action of the wind and waves, and exactly similar to those that have been formed, through the same causes, on the sea shore of some of our southern States. When not contiguous, these sand-hills are connected to one another by strong dykes, which are made to join with those that border the rivers and canals by which the country is intersected. Districts of more or less extent, according to circumstances or the wants of the several localities, are thus formed by an inclosure of embankments, and are placed under the superintendence of administrators, whose powers and duties are defined by law. The main object to which those administrators have to attend is to prevent the entrance of waters coming either from the sea, the rivers, or adjacent districts, which are known under the name of *exterior waters*. As the only means of protection is in the dykes, which form the circuit of every *hydraulic administration*, they are made of immense thickness, and always kept in the best repair. A kind of militia is organized for that purpose, and in every village there is a magazine of proper stores and a body of men, whose business it is, when a certain bell rings, to convey the necessary materials in carts to every damaged place.

But a large accumulation of water is formed, within the dykes, either by rain, the melting of snow, the filtration of exterior waters, or natural springs, which are, however, seldom met with. These *interior waters*, although evaporated in part by winds and heat, would, if they had no outlet, rise high enough to overflow the soil in the interior of the Districts. On that account, every circuit dyke is provided with one or more locks to permit the interior to escape into the exterior waters, whenever the ebb-tides or the land winds cause the last to fall sufficiently. Even if the interior waters could have been discharged without locks, these could not have been altogether dispensed with, to afford a passage to vessels and crafts of different kinds, in a country where so much inland navigation is carried on. When locks are opposed to exterior sweet waters, like those coming from rivers or neighboring administrations, they are often used, during long droughts, to admit those waters, for purposes of irrigation, when the interior waters have been absorbed by evaporation.

An hydraulic administration is therefore composed of a district, either large or small, shut up with dykes, to prevent the entrance of exterior waters and provided with locks to permit the issue of interior waters, the passage of vessels and sometimes the admittance of exterior waters, during dry seasons.

Every hydraulic administration has interior waters, which are contained in lakes or marshes surrounded by dykes; in rivers or creeks which have been closed; in canals and ditches, and often also in turf lands converted into lakes by the extraction of turf. These interior waters, which have an open and direct communication with one another and with the locks, are designated, when taken together as a whole, under the name of *boezem—basin*. The ordinary level of the basin is usually a little lower than that to which the water would rise, in summer, if the country was not shut up by dykes; and as the various basins are the means through which the inland trade of the country is carried on, if the level of an hydraulic administration is different from that of the adjacent one, double locks with flood gates are provided for the passage of boats or ships from one into the other.

Spots of land more or less elevated are found in every hydraulic administration. some are above the ordinary level of the basin and can, without artificial means, discharge the surplus rain water which they have received: they are called *natural lands;* others are below the level of the basin: these are the *polders* or drained marshes. They are of various extent and depth; from one hundred acres and less, to twelve thousand and more; from one foot to sixteen feet below the level of the natural lands. But, whether large or small, deep or shallow, every polder is surrounded by dykes, from which the surplus water proceeding either from rain, infiltration or springs, has to be taken up, usually by wind-mills, and thrown into the basin.

The basin therefore *receives* the waters which flow from the natural lands and that which the mills discharge from the polders. It *carries* them to the locks through which they escape, if the exterior waters are sufficiently low to permit it; or it *keeps* them, as long as the height of exterior waters prevents their discharge. The basin is, sometimes, also used as a *reservoir* to retain a supply of water, for purposes of irrigation, during prolonged droughts.

A large basin empties its waters slowly, and more time is besides required to keep it supplied during dry seasons. But it has on the other hand a double advantage: it receives a considerable mass of water, without an inconvenient change in its level, which enables the mills to draw as much as they please out of the polders, and it contains during summer, a supply which is large enough not to be destroyed by evaporation or the demands of the reclaimed low-lands. For each of the polders has a sluice, fixed in such a manner as to admit water from the basin, whenever it is wanted; and a long spell of dry weather or heat is not required to create that necessity. Those marshy lands, which are almost boggy during winter, soon suffer from the want of rain in summer. The interior of the polder is cut up by ditches and canals, which serve either to carry the surplus water toward the mills, or to spread the irrigation water admitted through the sluices.

If the basin is small, it has the advantage of being soon emptied in winter; but it labors under the inconvenience of being as easily filled up by the waters which the mills have extracted from the polders, so that these have frequently to be stopped, to prevent the natural lands from being first overflowed, and afterward the dykes surrounding the polders, which are often low and weak.

The polders are under the supervision of *polder masters*, elected at stated times by the owners of the land. They are to act in accordance with their own customs and regulations, and the by-laws enacted by the hydraulic administration to which they belong. This last power has to determine the point at which the mills must stop working, to prevent the water in the basin from being raised high enough to return again into the polders over their own dykes. For that purpose the relative heights of the dykes and waters have been carefully measured, and an accurate scale of the level of the water throughout the country has been made. This scale of waters, which, from the name of the place where it was first taken, is called the level of Amsterdam, is inscribed in a conspicuous and permanent manner in every part of the kingdom.

Innumerable wind-mills are used in Holland to drain the marshes. Their size and price are very different, according to the extent of the polder on which they have to operate, or the height to which the water is to be raised. The small mills, which shift to meet the wind like weather-cocks, may be had for about $120; while large mills of stone, constructed for deep draining, may cost as much as $12,000.

Wind is the moving power, and the straight paddle wheel the means employed to raise water. Latterly, however, wheels with inclined paddles and Archimides screws have been preferred. Steam engines have also been tried, but steam is seldom applied for the usual draining of the country; wind is thought to be preferable, because its daily use is less expensive.

This is no doubt true in Holland, where no forest can intervene between the mills and the sea or land breeze. The action of the wind is, from that cause, oftener and more regularly felt than it can be in Louisiana, until the surface of the country is cleared from the woods with which it is now nearly covered. Here, all the wind-mills that have been tried, have had hitherto to be given up, on account of the uncertainty of their operation. In England more than 100,000 acres of marshy lands or fens are drained, in Lincolnshire, by means of steam engines, which have been substituted to the wind-mills that had been formerly erected there under the direction of Dutch engineers. Experience has shown that, even in Holland, calculating the day for twenty-four hours, wind-mills, on an average, are in motion only sixty days in the year: during the balance of the time the wind is either too high or too low. It has also been computed that, after the first draining, the mills to keep their polders dry, must work every year during thirty days.

The Dutch wind-mills, with their paddle wheels, can raise water, on an average, to three feet six inches, but with Archimides screws, which are preferred above that height, they go to six and even ten feet. If the polder is twelve feet deep and the screw is used, then the mills are placed on different levels, so as to form two stories—the upper and lower story. The mills of the lower story lift up the water six feet from the bottom, and discharge it into an embanked canal, usually constructed on a small scale. From that place, the mills of the upper story carry it into the exterior waters: this closed canal is the *intermediate basin.* Two mills, at the depth of twelve feet, can therefore merely exert the force of one: they can only convey into the exterior waters the same quantity which a single mill could have raised from a depth of six feet. In all deep polders an intermediate basin must be used. In the polder of Zuidplas, near Rotterdam, which has an extent of nearly 15,000 acres, two intermediate basins are employed. There three mills, placed on three different levels or stories, exert only the force of one.

Where the level of the common basin is not sufficiently high to procure, toward the exterior waters, the requisite fall, an *upper basin* is sometimes used. It consists in an extent of water, elevated above the common basin and shut up between very high dykes, into which mills, specially employed for that purpose, raise the water of the common basin, so as to enable the polder-mills to continue to work on it. The upper basin acquires by that means the power of emptying itself into the exterior waters, when the common basin cannot do so. It is an expensive but a very useful improvement: it gives an artificial outlet to discharge the waters of the basin, when a natural fall cannot be obtained. It becomes the more effectual as its size is increased.

To exclude the water from shallow polders, small dykes only are raised; larger ones are, of course, required for more extensive marshes; but those erected against the sea or against rivers are the highest and strongest of all. The sea having been known to swell in extraordinary tides, and during the continuance of storms, as high as fourteen feet five inches above the level of the natural lands, the dykes intended as a protection against it must be, therefore, raised above that level. Those against rivers must be, as much as possible, higher than the greatest rise of water, which varies according to circumstances, but is unfortunately found to be gradually and steadily increasing, in consequence of the beds of rivers getting by slow degrees to be more elevated. This renders a proportional increase of the dykes necessary. Jetties, slopes of stone, rows of pickets or piles, beds of fascines, straw or reeds, carefully and regularly fixed, and sometimes brick walls are used, to protect those earthen ramparts against the furious attacks of the waves.

One of the largest and most important hydraulic administrations in Holland is that of the Rhinland, so called because one of the branches of the Rhine runs through its territory. It contains 305,040 acres, out of which 75,930 only are natural lands. The basin occupies 56,070. There are 198 polders, containing 173,040 acres, the surplus water of which is raised into the basin of the Rhinland by 261 mills; so that three-fourths of the whole superficial extent of the administration is under water, or would be so if not artificially drained. The average depth of the twenty-eight deepest polders, which cover an area of 37,050 acres, is fourteen feet eight inches. These 37,050 acres, which are among the best lands in the country, would be covered, in ordinary tides, by eighteen feet two inches of water, and by twenty-five feet seven inches in extraordinary tides and storms, if they were not prevented from returning to the ocean by that perpetual contest with the elements upon which the existence of the country depends.

In this administration is situated the lake or sea of Haarlem, which covers 44,460 acres, and is thirty-three miles in circumference, with a mean depth of thirteen feet. It had formerly about one-third only of its present extent, but the usual action of the water and the force of the waves, exerted constantly on a very light soil, have encroached so much on the land as to unite into a single one four small lakes, which existed in 1531; overflowing a part of the country where three large villages are known to have flourished. Various plans for draining the lake have been suggested during the last two centuries, but the magnitude of the enterprise and the large out-lays required, have prevented any final action on the subject, until the year 1839, when a law was passed appropriating the sum of $3,200,000 for the execution of the scheme. A board of commissioners was appointed to direct and superintend the undertaking, and after a most careful examination, they presented as the result of their researches the following estimates of the probable cost of the three different systems by which the lake might be drained:

One hundred and fourteen wind mills, divided into two stories of fifty-seven mills each, at an average cost of $10,000 for every mill, could remove the whole of the water in four years. The total amount to be expended by that plan is estimated at,	$1,480,000

Six steam engines, each of two hundred horse-power, applied to paddle wheels and screws, placed in two stories of three engines each, could effect the draining in two years, at a cost of	$680,000
With three steam engines applied to pumps, combining together the power of 1080 horses, and lifting the water of the lake to its full depth, i. e., working on a single story, the draining could be effected in fourteen months, at a cost of	480,000
To keep the lake drained, as a polder, after emptying the first water, the yearly expense of the one hundred and fourteen wind mills would be, for each	260
And for the whole,	29,640
Steam engines applied to water-wheels or screws,	29,200
Steam engines applied to pumps,	21,600

From these results, to which the commissioners state that they have arrived, after allowing every advantage to wind-mills and every disadvantage to steam engines, they conclude that steam is to be preferred to effect the draining and to maintain it when completed; because it is, for a work of that extent, the safest and cheapest motive power that can be used.

The surveys and examinations which preceded the final adoption of a plan; the expropriation of lands; the creation of new dykes; the digging of additional canals, and the widening of old ones to give a better fall and outlet to the basin of the Rhinland, have of necessity delayed the putting up of the machinery, by which the most extensive draining ever attempted is to be accomplished. Two steam engines were, however, put in operation in the summer of 1848; one is located near the village of Kaag and is called the Leighwater, in honor of the engineer who presented, two centuries ago, the first plan for draining the lake. The other bears the name of the village of Sparendam near which it is erected. This second engine is intended to empty the basin of the Rhinland into the exterior waters, in order to prevent the overflowing of that basin upon which the water of the lake is to be discharged. It is of two hundred horse-power, and sets in motion ten paddle wheels, constructed exactly on the plan of those that were erected several years before, for the New Orleans draining company, by that modest and skillful engineer, Mr. T. Communy. Each of these wheels is twenty-five feet in diameter and six feet ten inches wide. They all work on the same shaft, and are so fixed that they may either be all set in motion at the same time, or a part of them only. They raise the water two feet three inches high. When the ten wheels are made to operate together, they throw out a stream sixty-eight feet in breadth, the velocity of which can only be compared to that of the water rushing through a crevasse of the Mississippi.

To construct the Leighwater a circular dyke has been made in a place, near the shore, where the lake is said to have its greatest depth. The spot has been drained, and leveled at the depth of twenty-two feet, and fourteen hundred piles, each forty feet long, have been sunk at the bottom of this deep hole, to receive the foundations of the building. The engine which has been put up there is of four hundred horse-power. It works eleven pumps of cast iron, each sixty-three inches in diameter with ten feet stroke, giving seven strokes in a minute and lifting fifteen hundred and twelve gallons of water at every stroke, or six hundred and sixty-five thousand two hundred and eighty tons in twenty-four hours.

When these two engines were seen, in August, 1848, they had already lowered the water of the lake a little more than a foot. A third machine, constructed like the Leighwater, was soon to be put in operation. No doubt was then entertained that their united action could complete the draining in less than a year, and it is probable that the bottom of the lake or sea of Haarlem is either now in a state of cultivation, or will soon be made to submit to the action of the plow.

The kingdom of Holland contains 11,100 square miles; the State of Louisiana contains 46,431.

ART. VIII.—COMMUNICATION BETWEEN NEW YORK AND N. ORLEANS.

[IN the July number, 1849, of *Commercial Review*, an article appeared from Mr. Fairbanks, in advocacy of a route by railway and steam ships across Florida, between New York and New Orleans. The subject has attracted considerable attention from the public press, and been much discussed. It has led the way to the two following papers, which are presented to the reader, in order that he may perceive how fertile in great conceptions and enterprises are our countrymen. Being wedded ourselves to no particular system yet, in this as in other matters, we desire to understand the whole subject and then only determine.—ED.]

ABOVE you have the subject of article III, in the July number of *De Bow's Commercial Review of the South and West*. I entertain sincere respect for the author of that valuable work, and rejoice, in common with many others, that his labors have been resumed under auspices more favorable for the just reward of his service. I agree with Mr. De Bow, that "the idea of bringing New Orleans and New York, those great emporiums, by a safe and pleasant medium of travel within four days distance of each other, is worthy of the progressive spirit of the age, and is but another indication of the high destinies of our country." But I claim for Georgia the merit of starting, and being under way at the present moment, with the most flattering prospects of success, in the interesting work referred to. I do so, in no captious or complaining spirit—with no view of detracting from the merit of the projectors of the Peninsular railway—but in the hope that these lines may meet the eye of the intelligent author of the *Review*. I desire not to be understood as claiming for Georgia the merit of the idea of connecting by railroad the Gulf of Mexico with the Atlantic—and thus New Orleans with New York—for the subject has long been discussed. But I do maintain that the proper communication is through the line now being worked out in this State.

By the *Peninsular* route the plan is as follows:

"The distance from New York, by sea, to St. Marys, by the usual route for vessels, is about seven hundred and fifty miles; St. Marys being but about ninety miles from Savannah. The Cherokee has, with ease, made the voyage to Savannah in sixty hours, and could readily make the voyage to St. Marys in sixty-five hours. By the railroad route proposed from St. Marys on the Atlantic, across Florida to Cedar Keys on the Gulf, a distance of one hundred and forty-five miles, five hours would place the traveler on the Gulf, and the three hundred and seventy-five miles to New Orleans would be run in thirty-five hours; thus giving one hundred and five hours, or about four days, as the running time from New York to New Orleans, and, including all detentions, in less than five days, even at the present rates of speed, which are constantly being increased; a shortness of passage rendering all competition by any other route *entirely out of the question.* When taken in connection with the advantage of having only two transfers of baggage, and the superior comfort, convenience, and safety of traveling by sea steamers, would ensure for such a route, when established, nearly all the travel from New Orleans and the Gulf ports, North Texas, Mexico," etc. *Review No.* 1., *New Series, page* 47.

"The South-western Railroad" of the State of Georgia, beginning at Macon, and terminating at Fort Gaines on the Chatahoochee river, a distance of one hundred and fifty miles, was designed by its authors and projectors to develop the most fertile and valuable new cotton growing region in all the South, and also to be part of the line of railroad from the city of Savannah to Pensacola. It was claimed for this route that it would be "a line on the way, from New Orleans to New York which never could be *headed.*"*

This road is now being constructed. Over five hundred hands are at work on it—over twenty-five miles have been graded, and it is certain that the first fifty miles crossing the Flint river will be completed by the first day of September, 1850.

From Fort Gaines on the Chatahoochee river, to Pensacola, the distance, by the map of the United States, is one hundred and fifty miles. The Central Railroad to Savannah from Macon is one hundred and ninety miles long. A line, then, by ocean steam ships from New York to Savannah—a line of railroad from Savannah, by Macon and Fort Gaines to Pensacola, and again a line of ocean steam ships from Pensacola to New Orleans, would constitute the most expeditious and most profitable line which could possibly be made, with a view to the connection of New York and New Orleans.

I will endeavor to illustrate this, and think I can do so to the satisfaction of every candid mind:

1. "The *Cherokee* has with ease made her voyage to Savannah in sixty hours." The line of railroad from Savannah to Pensacola will be four hundred and ninety miles, and will be run, *calculating the speed at just the same rate that the Review indicates for the Peninsular Railroad*, in seventeen hours. The distance from Pensacola to New Orleans by the map is one hundred and sixty miles, and can be run (taking again the speed of the Review) in fifteen hours and a half—making the whole time from New York to New Orleans *ninety-two hours and a half*, against one hundred and five hours by the Peninsular route.

2. The line by Savannah, Macon, &c., is actually *shorter* than the line by St. Marys and Cedar keys. Take a line from Sandy Hook to Cape Hatteras, thence to Savannah, Macon, Pensacola to New Orleans. Then take a line from Sandy Hook to Hatteras, thence to St. Marys and Cedar Keys to New Orleans, and the latter line will be found to be some thirty miles the longer of the two. But allowing that by the map of the United States, the two lines spoken of, viz: the *Peninsular* and the *Georgia* lines, are of equal length, and it will follow that the Georgia line must be the most expeditious, because on it there will be three hundred and fifty-five miles of railroad more than on the other, and railway speed is nearly three times as great as ocean steam-ship speed.

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* See Report upon Preliminary Surveys of the South-western Railroad.—*Appendix, p.* 39, *etc.*, 1847.

Thus, it appears to me, is it fairly demonstrated, that the line by Savannah will be the *most expeditious*. That the line will prove the most profitable—that it will be more certainly sustained than the other—can be made equally clear.

1. The Peninsular line has not a town on it of fifteen hundred inhabitants. The railway part of it is through an uncleared, unsettled country, with scarcely any population. There will be nothing but *through travel* to sustain it.

2. The line by Savannah meets at that city a large and growing population—it passes by the important cities of Macon and Pensacola, and the Georgia Railroad portion of the line will be through a country producing and receiving some 250,000 bales of cotton annually.

3. The Central Railroad is now a profitable road, paying seven per cent., and it is destined to pay much more. The South-western Road from Macon to Fort Gaines, through, and draining the richest cotton region, will certainly, *by freight alone*, pay seven per cent. interest on the cost of it; and the road from Fort Gaines to Pensacola, it must be admitted on all hands, will at least be worth as much, intrinsically, as a road from St. Marys to Cedar Keys.

It requires, I apprehend, but little calculation or reflection to see the advantages of the Georgia over the Peninsular route. The interest of the United States in having a railroad from the best southern Atlantic port, Savannah, to the best port on the Gulf, Pensacola, is sufficient of itself, if all other things were equal, to give the preference to the line for which I contend. When the consideration is added, that the Central Railroad is now part of the Georgia line—that fifty miles of the South-western road will so speedily be opened—that the remainder of the line to Pensacola, two hundred miles, can be put in operation about as soon as the one hundred and forty-five miles of Florida railroad—that the inducements to the construction of the line to Pensacola, are much greater than they can be to the building of the other,—what judicious mind can hesitate to determine in favor of the route for which I contend.

It is due alike to truth and to the good judgment of the projectors of the line to Pensacola, to say a word on the subject of St. Marys harbor. It is stated in the *Review* (page 47), that the harbor of St. Marys "has a depth of thirteen feet on the bar at its lowest tides, and some twenty-three at high tides," and that "this is better than Charleston, and equal or superior to Savannah." It is notorious in Georgia, that the bar of Savannah river has the greatest depth of water on any river bar on the Atlantic south of the Chesapeake bay. All the harbors south of the Chesapeake bay were examined by a commission composed of captains WOOLSEY, CLAXTON and SHUBRICK, of the navy, and they reported as follows:

> "Depth of water and easy access being objects of the first consideration, they (the said officers) are of opinion that the ports of Charleston, Darien and St. Marys, being deficient in depth of water to permit the entrance of a larger ship than a sloop-of-war, *are unfit to compete with the frigate harbors* of Beaufort, Savannah and Brunswick. The bar at the mouth of the Savannah river *is the deepest and most accessible of any on the southern coast.* The average depth is nineteen feet at low water."

The spirit which has been evinced in Georgia in the construction of railroads, is a sure guarantee that the South-western Railroad will soon be finished. Even without the railroad from Fort Gaines to Pensacola, a good communication will thus be opened by the Apalachicola river to New Orleans, such a communication as would compel (but compulsion is not neccssary) the people of Pensacola to build a road to Fort Gaines.

You, Messrs. Editors and the Editors of the Savannah *Georgian*, have always done your part in giving light to our people on the subject of our roads. Arouse them now, I beg you, to the importance of finishing without delay the South-western Road. Let them know that since the acquisition of California—the grant of a right to pass, by railroad, the Isthmus of Panama, and the establishment of mail steam ships on the two oceans—the course of the commerce *of the world is soon to be changed*—changed before we can, with our utmost diligence, be ready to receive and pass through Georgia and through this city the multitudes who will follow that commerce. If the people of Georgia embrace the present time, if our next legislature shall grant liberal aid to this great work, in a very few years there will be nothing wanting to make this the *second State* in population and wealth of this Confederacy.

The fact has been presented that this route is, in straight lines, by the map of the United States, the shortest route. It is very plain that it will be the most expeditious route, because near five hundred miles of the way will be by railroad *through a remarkably level country*. In point of profitable investment, the Georgia route must certainly surpass the Florida route, because it will go through the heart of the most fertile and virgin cotton region in the United States—a region already well peopled and destined to sustain a very large population. These remarks are applicable to routes made up of land and water carriage.

We should not, however, shut your eyes to the fact, that in a short time, the railroads of South and North Carolina will be connected. Nor should we fail to consider what will be the effect of that juuction of railroads on the communication between New York and New Orleans. If a straight line be drawn on the map from New York city to the city of Pensacola, it will be found to pass *into* Georgia, not far above Augusta—to run a very short distauce westwardly of Macon, and to pass out of the State very near to, and a little south of, the city of Columbus. If the existing lines of railroad be now recollected and considered, it is very certain that whatever may be the plan of joining the North and South Carolina Railroads—whether by Wilmington, Manchester, &c., or by Raleigh or by Charlotte—*the city of Augusta will be on the line*. The tendency to this has been seen by many for years past; the fact that the State of Georgia is to be entered by a long line of railway from the North and East at Augusta cannot be disputed. It must be admitted, that the line of railway from New York to Augusta, will be *as short* as the ocean line from New York to Savannah, and, consequently, to St. Marys, Georgia. As railroad speed cannot be approached by steam ship speed, it is manifest that the most expeditious plan of carrying the great mail of the United States will be by railroad *through Augusta*, if a road is built from Augusta to the eighty mile station of the Central Railroad. The Government will not, four years hence, pay for the carriage of mails by sea between New York and the South Atlantic coast. Wherever the mail shall go, many, in fact the greater number of men *on business* will go. We should then look at Augusta as the starting point in Georgia whence the mails and consequently much travel will go, to and fro, across the State.

In this connection the intelligent reader will not fail to see the great importance to Augusta—Savannah and the Central Road—to Macon and south-western Georgia, southern Alabama and western Florida—of a railroad from the city of Augusta to the Central Railroad. This latter road built, and then the New Orleans mail route must *of necessity* be through Macon and the South-western Railroad.

The commanding position of the State of Georgia in the matter of internal communication of the Union, is now apparent to every one. We held the key to the West; we have opened the door by the Western and Atlantic Road. We hold the key to the Gulf of Mexico; let us now but open that door also, and we will arrive at a point of prosperity, the equal of which but few of our sister States will ever see.

Let me say a word for Savannah, and show the great advantage she has at this day over the city of Charleston. The latter city strained all her strength to get the trade of Georgia, and of the West through Georgia. She failed in her true policy of looking North instead of South. The great *metropolitan* route, between the North and South, might, if Charleston had pursued her true course, have been through Wilmington and Charleston and Savannah—a route through all the southern sea ports on the Atlantic line, instead of a line through the middle country. But now that great route approaches Charleston no nearer than *Branchville*—it cannot be made to approach Savannah nearer than the eighty mile station of the Central Road. Both Savannah and Charleston then are off the main mail railroad route.

But whilst it is seen that the great mail of the Union will so pass by Augusta, it does not follow that the great mass of promiscuous travel will be by the same line. The combined line of steam-ships and railroad by way of Pensacola and Savannah will be short of the mail line in point of speed, but it will far surpass it in comfort and ease of travel, and moreover it will prove the *cheapest* line between the two great points, New Orleans and New York. Open the line from Macon to Pensacola, and the traveler from New York will reach New Orleans in ninety-six hours, and the line itself will be supported and fairly compensated upon a through rate of $35 the passage. Savannah being so much to the South and West of Charleston, and so much nearer New Orleans has the advantage of Charleston. In a word, the opening of a road from Augusta to the Central Road and from Macon to Pensacola, will secure the city of Savannah against all rivalry whatever. The people of Savannah have looked at this state of things—they have invested some $400,000 in the South-western road; that line will go on. They have striven to obtain the road from Augusta to the Central, and every sign is now propitious for this crowning work.* C.

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* The above was published in an *extra* of the Savannah Republican, and forwarded to our address.

ART. IX.—DIRECT RAIL ROAD ROUTE FROM NEW ORLEANS TO NEW YORK.

A WRITER in the July (1849) number of the Commercial Review, calls public attention to a route from New Orleans to New York via Florida. He would take his passengers hence by steamer to Cedar Keys; thence across the northern part of Florida by railway to St. Mary's; thence by steamer to New York; and thinks the voyage could be accomplished in about four days, the distance being nearly thirteen hundred miles. The route certainly offers great advantages, and in this progressive epoch time and distance are valuable considerations: but when we set about economizing, let us do it effectually. It is useless to do indirectly and by degrees, what can be effected directly and at once; and in laying out a railway circuits must be avoided, if possible.

A continuous railway may ultimately pass from Mobile through Augusta to New York; but another and a better route can be selected—a route from New Orleans through the south-eastern part of Mississippi, diagonally through Alabama, across the eastern part of Tennessee, through Virginia between the Alleghany mountains and the Blue Ridge to Baltimore, or across Maryland to Philadelphia. The distance is less than nine hundred miles, the route is undoubtedly practicable, and a double track would allow the journey to be accomplished in two days, at considerable less cost than that now incurred by the passage by mail or steamer.

From New York to Philadelphia and Baltimore, the iron horse already travels. The only additional expense necessary through that section of a railway between New York and New Orleans, would be the outlay for another track over a road already graded. From this city, the old Nashville Company laid the rails twenty-four miles over marshy and difficult ground. A portion of the work is therefore completed, leaving about six hundred miles of new track.

The Georgia railway has been carried from Savannah over a hilly country to the confines of Tennessee, and it is to be pushed across the southern Alleghanies and the Cumberland Mountains to Nashville and perhaps to Memphis. The direct route hence to New York would encounter no greater obstacles than those already surmounted and to be surmounted by the Georgia and Nashville line, and of course would be attended with no greater expense per mile, while it would be productive of greater advantages to the public and more profit to the proprietors.

Let us see: take down your map and trace it. It passes, nearly the entire distance, through a fertile region, into which neither steamboat nor locomotive has yet penetrated. It brings that region into easy communication with the two great commercial marts of the republic. It offers to the planters and farmers of the region a market for their produce, as it were within a stone's throw of their doors; and it would add a new impetus to the trade of the whole country.

The expense of the road, including a double track, turn-outs, buildings, bridges, tunnels, trains, locomotives and apparatus of every kind, probably would not exceed twenty million dollars, and I believe it would fall below that estimate.

The receipts, without question, would go far beyond the most sanguine calculations. In the case of almost every railway in the United States, the receipts have exceeded the estimates, and there is no reason to believe this would be an exception to the rule.

Probably the number of passengers, who would annually pass to and from the extreme points over the whole distance, would not be less than sixty thousand, who, at fifty dollars per head, would yield three million dollars; and if we add to this the receipts for freight and way-passengers, the revenue would exceed four millions per annum. Deduct the expenses, salaries, etc., and we have a net profit of at least fifteen per cent. on the investment. This may seem extravagant, but a close examination of the proposed route—an inquiry into the capacities and resources of the region, and the number of passengers that would pass to and fro, must satisfy any one that my estimates are within bounds.

Then, as to the time which would be required to make the transit. By means of a double track, the delays in waiting for upward or downward trains would be avoided, and the moderate speed of twenty miles an hour, would take travelers from New Orleans to New York in about two days. Increase the speed to twenty-five miles an hour, and the journey would be accomplished in forty hours, including stoppages.

This route is certainly worthy of consideration, especially to the traveling and mercantile community; and I trust you will not fail to call public attention to it, and continue to do so until the work has been commenced. The road is practicable—it will be profitable; and, depend upon it, it will be made. Men will not incur great fatigue, and waste a week in going to the North or back, when the passage can be made in less than two days.

I profess to have no very accurate knowledge of the statistics of the region alluded to; but if I succeed in attracting the notice of business men and of writers conversant with the subject, I shall consider the work half done.

ART. X.—PUBLIC IMPROVEMENTS OF CHARLESTON—Part 1.

In a former communication on the "*Resources of Charleston*" I availed myself of the opportunity to award to my native city her full meed of credit for commercial advancement and increasing facilities for business. To a compliance with your polite request that I should introduce her again to your readers, a few leisure hours have been dedicated—and you must be satisfied to overlook the hasty and imperfect manner in which the following is written. As you desire that some notice should be taken of her more recent improvements in the industrial arts, and works of public and private enterprise, I will confine myself in the present brief sketch, to a review of those now in daily progress or prospective, and the results of which so far give promise of benefit to the community.

Three especially useful enterprises, yet in the infancy of their existence, but already promising valuable consequences, are developing severally the most important resources of this section of the State. These are—her capacity for home production and the opening of new avenues of labor. The objects to be accomplished have been long urg needed. They embrace—

1. *An unfailing supply of pure, wholesome Water.*
2. *A more convenient, effectual, and economical mode of lighting the city.*
3. *The encouragement of the manufacturing and mechanic arts by means of Associations and Factories.*

With the first is inseparably connected an investigation of the Geological characteristics of the State—and the aid of our scientific men has been freely given to its prosecution.

1. THE ARTESIAN WELL.

This enterprise was commenced in May 1847, under the superintendence of Gen. A. H. Brisbane, since elected Professor of History and Belles Lettres of the State Military Academy, who carried it to the depth of 290 feet. He followed the method pursued by the most successful European Engineers, boring with a diameter of 11 inches for the first sixty-three feet, and of eight inches for the whole distance below. After Professor B's. election to that Institution, the services of the present Superintendent, Mr. Welton, of Alabama, were secured. This gentleman brings to the work the practical experience of sixteen years, devoted to the business. Amid the many opposing obstacles which have materially retarded his unwearied labors, he has penetrated the depth of upward of nine hundred feet, continual torrents of quicksand pouring in all the time. It is estimated that a column of sand has been drawn out of the well more than 4000 feet in height—and for fully one-fifth of the way, the course has been through rocks so hard as to require the use of the chisel. The instruments used in the Alabama system of boring, are the auger, the chisel, and bucket, which are sent down by means of wooden rods. For a minute description of these tools I would refer your readers to the following extract from the Notes of Dr. Lynch, one of our most distinguished Geologists, whose coöperation and counsel have been invaluable, and freely given to those engaged in the prosecution of the work:

"The rods used by Mr. Welton are about 27 feet long and 3¼ inches in diameter, of strait grained, well seasoned pine, tapering toward their extremities, where they are armed with iron heads which are screwed into each other. The proper tool, screwed to one of these rods is first let down, until the other extremity of the rod just protrudes above the mouth of the well. In this position the rod is held by an iron catch or yoke, until a second rod is screwed on to the first. The first rod is then released and the second rod is let down until its upper extremity simply protrudes, as the first did, when it is similarly caught, until a third is attached to it; and so on, until the tool is on the bottom. The last rod is furnished with a cross-bar or handle, by which two workmen can raise or turn the rods as required. The whole again is elevated, when required, by a moveable pully, the rope of which is wound on an upright drum, eight feet diameter, turned by horse power. The upper rod is raised by the takle, until its lower extemity is clear, and above the mouth of the well. The upper extremity of the second, which now protrudes, is caught by the yoke and held, until the first is unscrewed and laid in its place. The second is then raised as the first was. The protruding end of the third is caught and held, while the second is unscrewed and laid aside. The others are then taken out in succession, and placed in their positions, after the same manner, until the tool is reached. To draw up twenty rods without loss of time will occupy nearly an hour. They can be let down, however, unless when the chisel is attached, in far less time. So nicely is the balance of wood and iron preserved in these rods, that, when the well is full of water, a single workman can lift 550 feet of length, with the auger attached. This must, of course, give the operator great command over the instrument, and enable him to feel and guide its working, even at that distance, with the nicest accuracy. Nor is this lightness gained at the expense of strength. For the iron screws, an inch in diameter and carefully made, and the wooden rods over three inches thick, are more than amply sufficient for any strain which they are required to bear. On the contrary, where the iron rods are used, the weight of the upper rods, which, in a deep well, may reach two or three tons, besides rendering the whole apparatus unwieldy, is, often, enough to bend or break the lower rod. At the Paris well, 1796 feet deep, they reached the enormous weight of 68,200 lbs. Moreover, this bending of the iron rods, for which there is ample room (the bore being four, six or eight inches in diameter, and they scarcely ever more than one and a half inches thick), produces much friction against the sides of the well, and has likewise a tendency to drive the tool at the bottom into an oblique course; whereas the wooden rods, being light, have no cause, and as they nearly fill the bore, have no room for any such deflection. They must bore on, in the direction in which they have been started. Their lightness and cylindrical form reduce the friction almost to nothing, compared with that attending the use of the other rods.

"The *auger*, for which Messrs. Cooper & Welton have a patent, is exceedingly simple and ingenious in its construction. A steel blade an inch wide and half an inch thick, tapering somewhat toward its point, is twisted two or three times and terminates with two cutting edges like a bitt for boring iron. About six inches above its point, it is armed with two other bitts somewhat like those of a plane, above an inch and a quarter broad and two inches long, inclined at an angle of about 45 degrees, so as to suit the curvature of the twist. Above the points, where they are securely attached on either side to the central blade or stem, they recede horizontally for about one-sixth of the circle, so as to give some support on which the load above can rest, yet not so far, as that either shall impede the ascent of the portion of earth cut by the other. This instrument is then screwed into a metal tube, which itself is screwed into the lower wooden rod. The entire breadth of the auger is three and a half inches. The two side bitts cut in the same direction. The load gradually ascends, or rather is forced up their inclined face, and becomes packed around the stem, in the cavity above. It is in drawing up this load, especially when it is large, that, in the ordinary system of boring, the engineer finds his greatest difficulty. The load will often pack so tightly, as to become a piston, perfectly air and water tight in the well, leaving, when raised from the bottom, a *perfect* vacuum below it. Under such circumstances, no mechanical power can extract the load from any depth. Either the load or the machinery must yield. The workman, generally endeavors, by turning the auger and load while raising them, by lowering them a little when tight, or by other devices to cause the water above the load to pass round it, and to enter the vacuum below, by which means he may extract his auger, though with the loss of the load. This, however, is a trifle compared with the danger, which he does not always escape. The pressure from above will sometimes compress the load to the hardness of stone, so that the water cannot work through, or by it, to fill the vacuum beneath and relieve the auger. This is the usual cause of the breaking of instruments in the well. At the Paris well, between 1300 and 1400 feet, such an accident occurred; in consequence of which, the auger was caught, and more than 1300 feet of iron rods broke off and fell to the bottom. The jar of collapse was felt to some distance like that of an earthquake. There was no way of extracting them but by enlarging the diameter of the well, all the way from the surface to beneath the auger; so as to destroy the vacuum—an operation which occupied fourteen months of hard labor. In the auger under consideration, this evil is admirably guarded against. The upper stem of the auger, eighteen or twenty feet long, is a metal tube, having near its upper extremity three or four suitable orifices. The upper part of the central bitt, where it is screwed into the stem, is likewise a tube, and has two vents below the side bitts. When, therefore, the load is raised, the water or air above enters through the orifices, rushes down through the stem, and is discharged through the vents into the well, *beneath* the load. A more ingenious or effectual provision against this evil could not be devised.

" In the action of the auger, it is plain that as each shaving or slice is forced up along the inclined bitt, it must raise the mass already bored, before it can become, as it ought, the lowest layer of the load. From this fact, the auger would soon become clogged, in a stiff, tenacious soil. A dexterous manipulation averts this evil. When six or eight inches are bored and packed, the auger is elevated about a foot. This is found sufficient to give the load the firm, piston-like character already referred to. The auger is then sunk quickly. The load, upheld by the water that has already passed below through the stem during its elevation, retains its place, while the open auger passes freely through the water, with its bitts as unclogged as when first sent down. Six inches more are bored, and by a second elevation that mass is added to the first load. A second rapid descent unclogs the auger, which again *bites the earth*. In this way, as much as ten feet or more may be bored through, in suitable soils, before it is necessary to draw up and unload the auger. Such are the loads usually brought up by this instrument in the Alabama wells. In the Charleston well, though it bored with the same efficiency in the firm marl, and brought up the load safely as far as the iron tubes, yet the current of water which their larger diameter allowed to pass around and along the sides of the load, never failed to wash a great part of it away. The evil had to be borne in patience. For that diameter was necessary, in order to allow other tubes to be sent down through them hereafter, should it be found necessary.

" Where a rock, or a stratum, too hard to be bored by the augur, occurs, a *chisel* of three and a half inches cutting edge, is screwed to one or two iron bars, the whole weighing three hundred or five hundred pounds accordingly as one or both bars are used. This too, is joined by the wooden rods, and let down on the rock as the auger would be. The whole is raised about two feet by a lever moved by horse power, and falls by its own weight. An ingenious arrangement, devised by Mr. Welton, saves the rods from being injured by the concussion. The chisel ordinarily gives twelve blows a minute, and is so turned by the upper or handle pole, as to strike in different positions. Mr. Welton has met, in this well, with rocks so hard that 3600 blows scarcely gained 10 inches.

"The detritus of the rocks chipped by the chisel, or whatever portion of its load the auger may have failed to bring out, as likewise the sands that may enter the well, are drawn out by a copper tube or *bucket*, 3½ inches diameter and 18 feet long, having a valved bottom opening inward. This is attached to the rods in the same manner as the auger. Since it nearly fits the well, whenever it is thrust downward, the water and mud beneath must rush upward through the interior. When it reaches the bottom, a quick upward motion closes the valve and secures the load. It is then drawn out and emptied.

"Of the various tools for extracting rods or whatever else may be lost in the well, I will say nothing. For accidents are so carefully guarded against, that they are but little used. When required, however, they come forth, as ingenious as the augur itself, and as well suited for their various purposes.

"These simple tools, working so regularly and so effectively, compared with the cumbrous and multiform machinery devised by European engineers for boring Artesian Wells, present a striking contrast as honorable to our country as it is characteristic of her sons."

Excellent drinking water has been obtained on the premises of a number of our citizens at the depth of sixty feet. At the Charleston Hotel, recently, a well was deepened, and a stratum penetrated at fifty-three feet, containing pure water, and it has since been ascertained that it can be procured at forty feet. The credit of having first made this discovery is given to our fellow citizen Francis S. Holmes, Esq., a gentleman whose devotion to geological pursuits, even amid the pressing cares of business, has earned for him a high reputation. Mr. Holmes's valuable collection has been greatly enriched and added to, by the specimens which he has been industriously classifying and arranging from the different strata through which this work has passed; and his published essays have attracted much attention. In this department his researches have been aided by those of Professor Hume of the State Military Academy, whose able writings on the subject have also appeared in our daily papers. Prof. H. gives Mr. Holmes the credit of having first called public attention to this grateful improvement upon the ordinary mode of procuring good well-water at a moderate depth.* He thus describes the "Sixty Feet Wells:"

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* Professor H. accounts very satisfactorily for the phenomena which puzzled the brains of so many of us here, who were not among "the knowing ones," during the hail-storm of May, 1848. It was abundantly evident that the cisterns, one and all, had been contaminated by something or other connected with the falling of the hail-stones, as the water was by no means drinkable for many weeks after the storm. The public mind had partially settled down into the conviction, that the waters of every cistern in town had simultaneously risen,

"The depth at which the inferior bed of sand is found being about sixty feet, the wells have naturally been called the 'Sixty Feet Wells,' in contradistinction to the superficial and the legitimate overflowing Artesian. This distinction is proper, not only in allusion to the depth of each, but in consideration of the source of each. The superficial are supplied with rain water which falls within the city, sinks into the earth, is arrested by the mud bed, and enters the various excavations in the earth made for its reception. The sixty feet wells have their source from rain falling beyond the outcrop of the mud stratum, probably eight or ten miles from the city, free from its impurities, and, consequently, purer, but liable to the contamination of the mud bed above, the peat bed below, and the marl bed in its immediate vicinity intermixing with both. The Artesian Well water is presumed to come from a distance of one hundred miles, from sources free from soluble matter, and conveyed to us through a sandy stratum bounded by the granite below and the silicious clay and sand-stone above, hence, delivered from all animal, vegetable or mineral contamination, and probably purer than the rain which fell upon the sandy plains of Lexington."

Public confidence has been sustained by the published opinions of these gentlemen, who are all sanguine as to the ultimate success of the project. The results have so far minutely corresponded with the calculations made as to the various progressive steps through which the work must pass. Nine successive strata have been perforated, until the silicious clay, which varies usually from two to thirty feet in thickness, has been reached, which forms the boundary between what has been already passed over, and the water bearing beds of sand and clays. The Great Well at Paris, was accomplished after the most trying embarrassments and discouragements. Geologists had originally assigned, as the greatest possible depth, twelve hundred feet. Council became dissatisfied, and were about giving it up as a hopeless case. One of their learned men arose, made a speech and induced its further prosecution. After boring sixteen and seventeen hundred feet without success, they abandoned it altogether. M. Mulot, the engineer, then undertook it at his own risk, and, at seventeen hundred and ninety-six feet, reached the summit of his hopes. This shows what perseverance can accomplish, and it is to be hoped that our Council will derive encouragement from

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with the heavy rains, and drowned in their unusual depths a regiment of those diminutive quadrupeds which are apt to infest such places of resort. It is refreshing to find that this unwelcome conclusion is not at all *rat*-ified by chemical analysis. He says: "To have water purer than rain may appear to some of my readers as hyperbolical; but it is well ascertained that rain water is never absolutely pure, and most of the cistern owners in the city will remember the disastrous consequences of the hail-storm of the last year. Had that hail been pure, there would have been no necessity to empty and clean out the cisterns, to get rid of a water that was not only disagreeable to the taste, but shockingly offensive to the smell. A portion that I obtained from a servant, who carefully preserved a bottle of it as 'a sovereign remedy for sore eyes,' underwent a regular fermentation, developing those albumenous clouds, like the 'mother of vinegar,' and presented sufficient characters to prove it to be of animal origin. I attributed it to the entanglement of a swarm of insects in the freezing drops, their subsequent death, the fermentative fate which attends all dead animal matter, and the resulting inconvenience to the living. Had this hail fallen upon the plains of Lexington, it is certain that the sand would have retained the insects, while the otherwise pure water would have passed into the sand."

it, or else, like the learned Assembly of Paris, yield up the glory of its final accomplishment at the last moment to the engineer who, in this case also, is as fresh and undaunted now as at the commencement of his labors.

2. GAS WORKS.

The experiment of lighting the city with gas, develops satisfactory results. A company has been formed with sufficient capital for extensive operations. The same prejudices which at first retarded the progress of this enterprise in New York, Philadelphia and Baltimore, threatened, for a time, to produce the same effects here. Danger from explosion, risk of fire and offensive odors arising from factories, were the chief difficulties to be apprehended. Strict investigation into the causes of such accidents where they did occur, in other places, confirmed the views of the advocates of the enterprise. It was ascertained that the risk of accident or danger is but small, if the ordinary care and attention necessary in every large establishment be paid by the officers and workmen employed on the premises. Recent improvements in the manner of purifying the gas have remedied its offensiveness. No smell is now perceptible in the houses where it is consumed, unless from an occasional defect in the pipe which may cause a portion of the gas to escape. On the score of *economy*, the reports which have been published are all decidedly in favor of the gas over the ordinary modes of lighting. As yet, the number of private consumers in this city is not large. Most of the public buildings and all the principal streets, are already lighted with it.

The works on Church street were constructed under the superintendence of Messrs. Batton and Dungan, Contractors of Philadelphia. The cost, including laying of pipes, &c., will, when completed, be about two hundred thousand dollars. There are twenty-one retorts (of cast iron) and seven benches, or ovens, in which the retorts are placed. The gasometer will hold ninety thousand feet of gas, supplying twenty-five miles of pipe: another is in progress, of the same size. Besides churches and public buildings, there are over six hundred private consumers. About twenty-five thousand feet of gas are manufactured at these works per twenty-four hours. The consumption of coal during the same time is about three tons.

Consumers are supplied after the manner first adopted in New York and Boston. The quantity consumed by each individual is accurately measured and charged accordingly. This is effected by an instrument called a *meter*, which is attached to the service pipe at the entrance of each house, the following description of which is taken from one of the Reports in the volume now lying before me.* "This instrument is of a cylindrical form, revolving in a case air tight. The inner cylinder, which is composed of four apartments of given dimensions, revolves in water, immersed to a point a little above the axis. Each compartment has two openings, one for the admission and the other for the emission of the gas. As the cylinder revolves by the pressure of the gas, the compartment rising out of the water fills, which displaces the water it contained, while the other, descending, refills with water, the gas passing upward through a discharge of pipe to the burners. The axle of the revolving cylinder operates upon gearing, to which clock hands are affixed, indicating on the dial the number of revolutions made, and, consequently (the capacity of the cylinder being previously ascertained), the quantity of gas consumed is measured. The adoption of this system tends to the advantage of all parties. The consumer pays for no more than he uses, and, consequently, burns with as much economy as is consistent with his interest, and the producer not subjected to loss from carelessness or malice. The key of this meter is kept in possession of the manufacturer."

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* Reports of the Trustees of the Philadelphia Gas Works.

The following compose the officers of the Company:
Joshua Lazarus—President.
John R. Heriot—Secretary and Treasurer, and Superintendent of the Works.
Directors—Hon. T. L. Hutchinson, Henry Gourdin, Robert Martin, Geo. S. Cameron, Otis Mills, H. W. Conner, M. C. Mordecai.

3. MAGNETIC TELEGRAPH.

We have our branch of the Great Magnetic Line between Washington and New Orleans. Though the interruptions to steady communication have been frequent and vexatious, the public interest has been sufficiently benefited to entitle those interested in its establishment to the distinction of having contributed to one of the greatest enterprises of the age. The three daily papers constitute the principal support of the undertaking. The promptness with which the readers of these journals are now supplied with the latest intelligence is creditable to their public spirit and should be equally satisfactory to their patrons. But the age is progressive, and the march of improvement is always onward. It is not surprising, therefore, that, having succeeded in obtaining news by *lightning*, people should become dissatisfied and long to get it by some *still quicker* means. The "Telegraph" in this city was the wonder of a day; but habit has reconciled us to its marvelous workings, and nobody thinks it wonderful now-a-days.

4. MECHANICS' INSTITUTE.

As a means of encouraging the industry of our young mechanics and those engaged in the industrial occupations generally, an association has been formed within a few months past, under this title. It has regular and life members, the former paying, annually, a contribution of two dollars, and the latter, on initiation, twenty-five dollars. The annual meeting of the Institute is to be held on the second Wednesday in May of each year. The Annual Fair will take place in this city on Wednesday, 17th of October, next. Specimens of art, ingenuity, mechanical skill and industry of every description, are in course of preparation for this occasion, for which premiums are to be awarded. This is, I believe, the first effort made in the southern States to advance the mechanic arts, by means of an annual fair on the principle of those which have proved so beneficial to northern mechanics.* The Board of Managers have published a Circular, earnestly soliciting the coöperation of all who feel an interest in the prosperity of the South; and appealing to mechanics, manufacturers, and all engaged in occupations of skill and industry, of whatever description, to send some specimens to this exhibition—and they express the hope that every district in this State, and of our sister States, will be represented at the Fair.

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* We have had one several years in Louisiana—now very much in decay, but to be soon revived.—Ed.

The following are the Premiums to be awarded:

For the best Specimen a Silver Medal, and for the next best a Diploma.

For New Inventions a Gold Medal, at the discretion of the Committee.

Articles of all kinds not named below will be received, and Premiums awarded for the same.

Architectural Drawing.
Design for Diploma for the So. Ca. Institute.
Painting in Oil.
“ in Water Colors.
Miniature Painting.
Pen Drawing.
Pencil “
Crayon “
Sculpture.
Penmanship.
Best mode of Constructing Wharves.
Best Press for Packing Cotton.
Best Rice Thrashing Machine.
Best Cotton Gin.
“ Refrigerator.
“ Plow.
“ Churn.
“ Washing Machine.
Stone Masons' Work.
Carpenter's Work, by hand.
“ “ by machinery.
Carving in Wood.
Model of a Ship,
Specimens of—
  Boat Builders' Work,
  Ship Joiners' Work,
  Pump and Block Making,
  Mill-Wrights' Work,
  Coopers' Work.
Four Wheel Carriage.
Buggy.
Gig or Sulky.
Cart or Dray.
Steam Engine.
Fire Engine.
Turning in Brass, Iron or Wood.
Blacksmiths' Work.
Casting in Iron or Brass.
Iron Railing Fence or Gate Work.
Brass or Copper Work.
Locksmiths' “
Bell Hanging “
Gunsmiths' “
Instrument Makers' Work.
Lamp “ “
Jewelers' “
Silversmiths' “
Silver Plating.
Die Sinking.
Egraving on Steel, Copper or Wood.
Lithography.
Mechanical Dentistry.
Clock and Watch Making.
Cutlery.
Ornamental House Painting.
Ornamental Sign “
Cabinet Work.
Fancy Printing.
Book “
Ruled and Bound Ledger.
Fancy Binding.
Paper.
Side of Sole Leather.
Side of Harness “
Calf Skin, dressed for Boots.
Carriage Harness.
Buggy or Sulky Harness.
Cart or Dray “
Riding Saddle.
Beaver or Silk Hat.
Cloth Cap.
Military or Fireman's Cap.
Pair of Boots.
“ of Shoes.
“ of Ladies' Gaiters.
“ of “ Slippers.
Tailoring.
Umbrella or Parasol.
Hair Dressers' Work.
Gilding,
Stucco Work.
Modeling in Plaster.
Tin Work.
Plumbing.
Basket or Wicker Work.
Wooden Ware.
Dyeing in Wool, Silk or Cotton.
Upholsters' Work.
Mantua Making.
Millinery.
Shirt Making.
Quilt.
Embroidery in Gold or Silver.
Embroidery in Silk or Worsted.
Artificial Flowers.
Ornamental Hair Work.
Raw Silk, not less than ½ lb.
Manufactured Silk.
Weaving, Hand Loom.
“ Power “
Specimen of Cotton Yarn.
Pair of Knitted Stockings, Socks or Gloves.
Coach Lace.
Gimp, Fringe, and Ornamental Weaving.
Confectionery.

Refined Loaf Sugar.
Pottery.
Glass.
Manufactured Iron.
Cut Nails.
Wrought Nails.
Gray Bricks.
Press "
Fire "
Turpentine, manufactured.
Soap.
Tallow, Sperm, or Wax Candles.
Soda Water.
Cake Making.
Starch.
Flour.
Butter for winter use, not less than 10 lbs.
Cheese.

This useful society has been organized chiefly through the active efforts of Wm. Gregg, Esq., the President, who is the moving spring of the manufacturing interest in our State, and a practical man—in every sense of the word. Mr. Gregg is the founder and proprietor of the Graniteville Factory in this State, and is more or less interested in several others. The success of his efforts has led to the establishment of the Hampstead Factory in the immediate neighborhood of this city, and others which I shall have occasion to notice hereafter.

ART. XI.—COTTON MANUFACTURES OF THE UNITED STATES.

HISTORICAL SKETCH OF THE RISE AND PROGRESS OF THE COTTON MANUFACTORIES OF THE UNITED STATES.

[We intend publishing a regular series upon this head and commence with the leading chapters from the work of James Montgomery, a practical manufacturer, issued from the British press and not republished yet in this country. As cotton manufactures are more extensively introduced at the South and West, it becomes necessary we should have the most minute knowledge in regard to them. The work before us is entitled, "A Practical Detail of the Cotton Manuture of the United States of America and the state of the Cotton Manufacture in that country contrasted and compared with that of Great Britain, and comparative estimates of the cost of manufacturing in both countries," etc.—Ed.]

As early as the year 1787, a society was formed in Philadelphia, under the name of the "Pennsylvania Society for the Encouragement of Manufactures and the Useful Arts," which made some progress in the manufacturing of various kinds of goods, such as jeans, corduroys, fustians, plain and flowered cottons, flax linens, tow linens, &c. But the machinery employed in this manufacture seems to have been of the very rudest kind. A short time before the formation of this society, an attempt to spin cotton yarn by machinery had been made at Bridgewater and Beverly, in the State of Massachusetts. Two mechanics from Scotland, Alexander and Robert Barr, brothers, were employed by a Mr. Orr, at East Bridgewater, to make carding, spinning, and roving machines, which they completed; and on the 16th of November, 1786, the general court of Massachusetts made them a grant of £200, lawful money, for their encouragement, and afterward added to the bounty, by giving them six tickets in the State land lottery, in which there were no blanks.

In March 1787, Thomas Somers, an English midshipman, constructed a machine, or model, under the direction of Mr. Orr; and, by a resolution of the General Court, £20 were placed in the hands of the latter, to encourage him in the enterprise.

The above remained in the possession of Mr. Orr for the inspection of all disposed to see them, and he was requested by the general court, to exhibit and give all information or explanation regarding them. It is believed that the above were the first machines made in the United States for the manufacture of cotton.

The Beverly Company commenced operations in 1787, and are supposed to be the first Company that made any progress in the manufacture of cotton goods (that at Bridgewater had been on a very limited scale); yet the difficulties under which they labored—the extraordinary loss of materials in the instruction of their servants and workmen—the high prices of machines unknown to their mechanics, and both intricate and difficult in their construction, together with other incidents which usually attend a new business—were such that the Company were put to the necessity of applying to the State legislature for assistance, to save them from being compelled to abandon the enterprise altogether.

In their petition to the Senate and House of Representatives of Massachusetts, presented June 2d, 1790, only three years after they had commenced operations, they state: "That their expenditure had already amounted to nearly £4000, whilst the value of their remaining stock was not equal to £2000, and a further very considerable advance was absolutely necessary, to obtain that degree of perfection in the manufacture, which alone could ensure success."

Accordingly a grant of £1000 was presented to them, to be appropriated in such a way as would most effectually promote the manufacturing of cotton piece goods in the Commonwealth.

The petition above referred to, and other collateral facts, sufficiently prove that cotton spinning in this country, further than the hand card and one thread wheel, was carried through its first struggles by the Beverly Company in Massachusetts. And from this State the manufacture was carried to Rhode Island—though it must be acknowledged that both States were indebted to foreign emigrants for instruction and assistance in spinning and weaving, as well as in preparing the cotton.

Cotton spinning commenced in Rhode Island in 1788, in which year Daniel Anthony, Andrew Dexter, and Lewis Peck, all of Providence, entered into an agreement to make what was then called "Home Spun Cloth." The idea at first was to make jeans of linen warp spun by hand; but hearing that Mr. Orr of Bridgewater, and the Beverly Company, had imported some models or draughts of machinery from England, they sent thither and obtained drawings of them, according to which they constructed machinery of their own. The first they made was a carding machine, which was something similar to those now used for carding wool, the cotton being taken off the machine in rolls, and afterward roped by hand. The next was a spinning frame, something similar to the water frame, or rather the common jenny, but a very imperfect machine. It consisted of eight heads of four spindles each, being thirty-two spindles in all, and was wrought by means of a crank turned by the hand; this, after being tried for some time in Providence, was taken to Pawtucket and attached to a wheel propelled by water: the work of turning the machine was too laborious to be done by the hand, and the machine itself was too imperfect to be turned by water. Soon after, these machines were sold to Moses Brown, of Providence; but as all the carding and roving was done by hand, it was very imperfect, and but very little could be done in this way. Such were the rude machines used for spinning cotton previous to 1790; and the wonder is, not that the manufacturers failed in their undertakings, but rather that they were able to persevere. And we can now perceive that from these small beginnings, the present brightened propects received their foundation.

Previous to 1790, the common jenny and stock card had been in operation in various parts of the United States: and mixed goods of linen and cotton were woven, principally by Scotch and Irish weavers. Mr. Moses Brown, of Providence, had several jennies employed in 1789, and some weavers at work on linen warps. The jennies were used for making weft, and operated by hand in the cellars of dwelling houses. During 1790, Almy and Brown, of Providence, manufactured 326 pieces, containing 7823 yards, of various kinds of goods. There were also several other companies and individuals in different parts of the Union, who manufactured goods from linen warps and cotton weft. But, notwithstanding these most laudable and persevering efforts, every attempt failed of success, and they saw their hopes and prospects entirely prostrated. There was no deficiency of enterprise or exertion; no want of funds, or of men ready and willing to engage in the business; and no lack of patronage from the government, they having learned from the privations to which the country was subjected during the revolutionary war, the absolute necessity of promoting and encouraging domestic manufactures. The great cause of these failures is to be found in the fact, that during all these incipient struggles to establish the cotton manufacture in America, Great Britain had in full operation a series of superior machinery, which the manufacturers in this country had in vain endeavored to obtain.

It is to be remembered that Sir Richard Arkwright took his first patent for an entirely new method of spinning cotton yarn for warps in 1769, at which period his first mill was put in operation at Nottingham, in England; and his second mill, which was much larger, was erected at Cromford, Derbyshire, in 1771. After which his mode of spinning by water frames extended rapidly all over the kingdom; so that during the period when the most persevering exertions were being made, by various enterprising individuals, in different parts of the United States, to improve and perfect this most important manufacture, England was enjoying all the benefit of Arkwright's patents, by means of which cotton yarn was produced at much less expense, and of a superior quality to any that had ever been made by machinery before that period: and at the same time, the British government were using every means in their power to prevent models or drawings of these machines from being carried out of the country. Every effort to erect or import this machinery into the United States had hitherto proved abortive. Much interest had been excited in Philadelphia, New York, Rhode Island, and Massachusetts, but they found it impossible to compete with the superior machinery of England. The difficulties under which these incipient measures, toward the establishment of the business, were pursued, can hardly be conceived at the present day, even by a practical machinist or manufacturer. Besides the difficulties experienced in consequence of imperfect machinery, the period at which the business commenced in this country was also most unfavorable, as from the peculiar state of the manufacture in England at that time, and other causes, many in that country became bankrupts, their goods were sold at auction and shipped to the United States in large quantities, where they were again sold at reduced prices. Agents were also sent from England to the various manufacturing towns with goods, which were sold at low prices and long credit given, extending in some instances to eighteen months. It is likewise said, that British manufacturers formed themselves into societies, for the purpose of sending goods to this country, to be sold on commission, when they could not be disposed of to advantage at home.

Such was the state of the cotton manufacture in the United States in 1790. Every endeavor to introduce a proper system of spinning had been fruitless; and nothing but the introduction of the water frame spinning, which had superseded the jennies in England, could have laid a foundation for the successful prosecution of the business in America; and that was happily accomplished by one who was personally and practically acquainted with the business in all its details. The individual here referred to was Mr. Samuel Slater, who has justly been called the FATHER OF THE COTTON MANUFACTURE OF AMERICA.

Mr. Slater was born in the town of Belper, Derbyshire, England, on 9th June, 1768; and when about fourteen years of age, he was bound an apprentice at Milford, near Belper, to Jedediah Strutt, Esq. (the inventor of the Derby ribbed stocking frame, and for several years a partner with Sir Richard Arkwright in the cotton spinning business). At that time Mr. Strutt was erecting a large factory at Milford, where Slater continued to serve him for some time in the capacity of clerk, but during the last four or five years of his apprenticeship, his time was solely devoted to the factory, as general overseer, both as respected the making of the machinery and in the manufacturing department. After having completed the full term of his engagement, viz., six and a half years, he continued for some time longer with Mr. Strutt, for the purpose of superintending some new works that were then erecting: his design in doing so was to perfect his knowledge of the business in every department, as previous to this time his thoughts had been directed to America, by various rumors which had reached Derbyshire, of the anxiety of the governments of the different States in that country to introduce and encourage manufactures. A newspaper account of a liberal bounty of £100 having been granted to a person who succeeded in constructing a very imperfect carding machine for making rolls for jennies, and the knowledge that a society to promote manufactures had been authorized by the same legislature, finally determined him to try his fortune in the western hemisphere.

Mr. Slater had a perfect knowledge of the Arkwright mode of spinning; and from the confidential situation he occupied under Mr. Strutt, few enjoyed the same opportunities of acquiring a complete knowledge of all the minutiæ of the business; and being a person of retentive memory, close observation, and attentive to his engagements, it can easily be supposed that he must have been eminently qualified to introduce the cotton manufacture into America upon the same improved scale in which it was then in operation in England, especially as his mind had been for some time directed to that object. For, having once determined to leave his native country, and give to the land of his adoption all the benefit of his practical knowledge and enlarged experience, there is every reason to suppose that he would embrace every opportunity of preparing himself for the great object he had in view. He knew that it was impossible to take any patterns or drawings along with him, as the government restrictions were very severe, and the custom-house officers scrupulously searched every passenger for America. It was therefore necessary that he should be fully qualified to superintend the building and arrangement of the mills, the construction of the machinery, and to direct the details of the manufacture, without the aid of a single individual; as the whole business was new to the people of this country, he could not expect any one to assist him except by his own directions. He, accordingly, stopped with Mr. Strutt until he considered himself qualified to engage in this important enterprise.

He embarked at London for New York, on the 13th of September, 1789, and landed at the latter on the 17th November, after a passage of sixty-six days. He was immediately after his arrival introduced to the New York Manufacturing Company; but finding that the state of their works did not suit his views, he left that place in the January following for Providence, Rhode Island, and there made arrangements with Messrs. Almy and Brown, to commence preparations for spinning cotton entirely upon his own plan: on the 18th of the same month, the venerable Moses Brown took him out to Pawtucket, where he commenced making the machinery, principally with his own hands; and on the 20th December, 1790, he started three cards, drawing, and roving, together with seventy-two spindles, entirely upon the Arkwright principle, being the first of the kind ever operated in this country. These were worked by the water wheel of an old fulling mill in a clothier's building, in which place they continued spinning about twenty months; at the expiration of which time, several thousand pounds of yarn were on hand, notwithstanding every exertion had been used to weave it up and sell it.

Early in 1793, Almy, Brown, and Slater, built a small mill in the village of Pawtucket—known to this day by the name of the Old Factory—in which they put in operation seventy-two spindles, with the necessary preparation, and to these they gradually and slowly added more and more as the prospects became more encouraging. After a short time, besides building another factory, they considerably enlarged the first.

Such then were the circumstances under which the Arkwright mode of spinning was introduced into this country, and such was the individual to whom belongs the entire merit of its introduction. Previous to 1790, the year in which Mr. Slater arrived at Providence, and which is justly denominated the era of the American cotton manufacture, there had been introduced at various places, particularly at New York, Providence, and Massachusetts, jennies, billies, and cards, for spinning cotton weft, to be woven into velverets, jeans, fustains, &c., with linen warp; but the history of those times shows the imperfection of the above named machines to have been such, as to preclude the manufacture of cotton cloth, or cotton yarn for warps—that they were defective in their operations—deficient and expensive in their application—and that, under such difficulties and perplexities, it was entirely beyond the power of American manufacturers to compete with foreign goods introduced by British agents and American merchants, even though assisted by legislative aid, as was done at Beverly.

The citizens of Massachusetts, perplexed and involved in their incipient and imperfect attempts to manufacture cotton goods, and fully aware of the importance of introducing a better system of machinery, which they knew to be in successful operation in Great Britain, exerted themselves to obtain a model of the Arkwright patent spinning frame; but finding no person able to construct that series of machinery, and unable to obtain one from England, in consequence of the severe penalties imposed by the government on the exportation of machinery, they entirely failed in all their efforts. In this gloomy period of the American manufacture, Mr. Samuel Slater, as already stated, then in the employ of Strutt and Arkwright, having seen a premium offered by the Pennsylvania Society for a certain machine to spin cotton, was induced to leave the land of his fathers, where he had every prospect of succeeding in business, and embark for America. After his arrival, being informed that Moses Brown, of Providence, had made some attempts at water spinning, he repaired thither; but on seeing Mr. Brown's machinery, he pronounced it entirely worthless, and advised him to lay it aside. At this period, without the aid of a single individual skilled in making machinery, Mr. Slater constructed the whole series of spinning machines upon the Arkwright principle, and put them in operation so perfectly, as to supply all the establishments with cotton warp superior to linen; and in fourteeen months, Mr. Brown informed the Secretary of the Treasury, that machinery and mills could be erected in one year, to supply the whole United States with yarn, and thus render its importation unnecessary. Such is the amount of evidence regarding the introduction of the Arkwright machinery into the United States; and if the manufacturing establishments are in reality a blessing, as has been well observed, the name of Slater must ever be held in grateful remembrance by the American people.

Mr. Slater labored under every disadvantage, in the construction of his machinery; for although he had perfect confidence in his own remembrance of every part and pattern, and in his ability to perfect the work according to his agreement, yet he found it difficult to get mechanics who could make any thing like his models. But, perhaps, one of his greatest difficulties was to get card sheets made to suit his machines, as the card-makers in this country were entirely unacquainted with the operations of his machinery; indeed, the first carding machine he put in operation, had almost turned out an entire failure, in consequence of the defective manner in which the card teeth were set. But he persevered until he overcame this, as well as all his other difficulties; and his case furnishes one other bright example of the never-failing success which always attends patience and perseverance in the pursuit of any laudable object.

In 1798, Mr. Slater entered into partnership with Oziel Wilkinson, Timothy Green, and William Wilkinson; the two latter, as well as himself, having married daughters of Oziel Wilkinson. He built his second mill on the East side of Pautucket river; the firm was Samuel Slater & Co., as he owned one-half of the stock. A short time afterward the hands in the mill revolted, or struck for higher wages; five or six of them went to Cumberland, and erected a small mill, owned by Elisha Waters and others: from these men and their connections, several factories were commenced in various parts of the country, and, in fact, most of the establishments erected from 1790 to 1809, were built by men who had, directly or indirectly, drawn the knowledge of the business from Pawtucket, the cradle of the American Cotton Manufacture. Some of his servants stole his patterns and models, and by that means his improvements were soon extended over the country; so that the business has, from that to the present time, been rapidly extending over the United States.

Mr. Slater's business was so prosperous, that about the year 1806, he invited his brother, Mr. John Slater, to come to this country, who, in all probability, brought with him a knowledge of all the most recent improvements made by the English spinners. The now flourishing village of Slatersville in Smithfield, was then projected, in which John Slater embarked as a partner, and in June of the same year, removed to Smithfield as superintendent of the concern. In the spring of 1807, the works were sufficiently advanced for spinning; and up to the present time, they have been under the management of that gentleman in an uninterrupted state of improvement. This fine estate was owned in equal shares by four partners, but now wholly belongs to John Slater and the heirs of his brother.

Cotton spinning, according to the preceding statements, commenced in the then obscure village of Pawtucket in 1790, at which time only seventy-two spindles were put in operation. Since that time, the rapid extension of the business in this country has been equaled only by that of Great Britain. According to the report of a Committee, appointed by Congress in 1832, to inquire into the progress of spinning and of the manufacture of cotton goods,

The number of mills in twelve States were		795
Spindles in do.		1,246,503
Looms in do.		33,506
Males employed in the manufacture,	18,539	
Females do. do.	38,927	
Total employed,		57,466

Previous to 1815, the whole weaving in the United States was done by hand looms, in many of which considerable improvements had been made, and great quantities of cloth were manufactured for home consumption. About 1814, a Mr. Gilmour landed in Boston from Glasgow, with patterns of the power loom and dressing machine, whom Mr. John Slater invited to Smithfield, and made known to him his wishes to construct these important machines; but not being able to prevail on the whole of the partners to engage in the business, Mr. Gilmour remained some time in Smithfield, employed as a mechanic, where he introduced the hydrostatic press, which proved to be of great advantage in pressing cloth, &c.

Judge Lyman, of Providence, had been endeavoring to construct a power loom, but failed in the attempt. On hearing of Mr. Gilmour, he, with some other gentlemen, entered into a contract with him, to build a power loom and dressing machine from the patterns he had brought from Great Britain, which he did to the great satisfaction of his patrons, from whom he received a compensation of $1500. These machines were soon after introduced into Pawtucket, where David Wilkinson commenced making them for sale. Gilmour was a man of great mechanical genius, but neglected to turn his talents and opportunities to the advantage of his family, and, consequently, on his death, they were left in poor circumstances.

The hand looms were soon superceded by the others, the introduction of which greatly aided in extending the business in this country, and has enabled the American manufacturers to compete with Great Britain in South America, India, and some other foreign markets.

The preceding historical sketch details the introduction of the cotton manufacture into the United States, and the names of the several gentlemen through whose enterprising exertions it was first established. But in order to know its success, or the extent to which it has arrived, it is necessary to give some account of the various manufacturing districts. As the cotton factories of America, however, are widely scattered over a great extent of country, it is impossible here to take notice of them all. Some observations on a few of the principal districts is all that will be attempted.

It has already been stated in a former part of this work, that Massachusetts is the principal manufacturing State in this country. An act was past by the Senate and House of Representatives of that State, in 1837, for the purpose of obtaining "Statistical information in relation to certain branches of industry within the Commonwealth." The following table is copied from the report of the Secretary of the Commonwealth, which he prepared from the returns of the assessors in the various towns and cities in the State:

STATEMENT of the Cotton Manufactures in twelve of the States, in 1831.

States.	Capital.	Number of spindles.	Yards of cloth produced yearly.	Pounds of cloth produced yearly.	Pounds of cotton consumed yearly.
Maine,	$765,000	6,500	1,750,000	525,000	588,500
New Hampshire,	5,300,000	113,776	29,060,500	7,255,060	7,845,000
Vermont,	295,500	12,392	2,238,400	574,500	760,000
Massachusetts,	12,891,000	339,777	79,231,000	21,301,062	24,871,981
Rhode Island,	6,262,340	235,753	37,121,681	9,271,481	10,414,578
Connecticut,	2,825,000	115,528	20,055,500	5,612,000	6,777,209
New York,	3,669,500	157,316	21,010,920	5,297,713	7,661,670
New Jersey,	2,027,644	62,979	5,133,776	1,877,418	5,832,204
Pennsylvania,	3,758,500	120,810	21,332,467	4,207,192	7,111,174
Delaware,	384,500	24,806	5,203,746	1,201,500	1,435,000
Maryland,	2,144,000	47,222	7,649,000	2,224,000	3,008,000
Virginia,	290,000	9,844	675,000	168,000	1,152,000
Total,	40,612,984	1,246,703	230,461,990	59,514,926	77,457,316

The preceding table shows the extent of the cotton manufacture of the United States in 1831; since that time there has been a considerable increase. The amount of capital invested in manufactures in the State of Massachusetts was then 12,891,090 dollars; in 1836 it had increased to 14,369,719 dollars, being nearly twelve per cent. in the space of only five years; but, allowing the ratio of increase since 1831 to be ten per cent. all over the Union, the amount of capital now invested in the cotton manufacture cannot be less than forty-five millions of dollars, equal to £9,375,000 sterling, being about a fourth part of the capital invested in the cotton manufacture of Great Britain.*

The following table contains the number of mills, rate of weekly wages, and the number of hands employed in the factories in 1831.

States.	Mills.	Looms.	Males employ'd	Average wages of males weekly.	Females employ'd	Average wages of females weekly.	Children under 12 employ'd	Average wages of children.
Maine,.........	8	91	84	$5 50	205	$2 33		
New Hampshire,	40	3,530	875	6 25	4,090	2 60	60	$2 00
Vermont,........	17	352	102	5 00	363	1 84	19	1 40
Massachusetts,..	256	8,981	2,665	7 00	10,678	2 25		
Rhode Island,..	116	5,773	1,731	4 25	3,297	2 20	3,472	1 50
Connecticut,....	94	2,609	1,399	4 50	2,477	2 20	439	1 50
New York,......	112	3,653	1,374	6 00	3,652	1 90	484	1 40
New Jersey,....	51	815	2,151	6 00	3,070	1 90	217	1 40
Pennsylvania,..	67	6,301	6,545	6 00	8,351	2 00		
Delaware,......	10	235	697	5 00	676	2 00		
Maryland,......	23	1,002	824	3 87	1,793	1 91		
Virginia,.......	7	91	143	2 73	275	1 58		
Total,.........	801	33,433	18,590		38,927		4,691	

ART. XII.—DAYS OF GRACE ON SIGHT BILLS OF EXCHANGE.

It is little more than a year since it began to be mooted, in this city, whether bills at sight are due on presentation, or on the last day of grace. The first case in which the question came up, was decided in the Fourth District Court of New Orleans, in March, 1848, upon a bill drawn here on Philadelphia. The point was presented, but not argued, Judge Strawbridge being satisfied without argument, that grace was to be allowed, both by the law of Pennsylvania and of Louisiana. No attempt was made to prove the custom of Philadelphia; and the case went off, in favor of the defendants, on another point. Afterward, suits were brought in the Third District Court, on bills drawn here on New York, in which the question was fully argued; and the opinion of the court was, that grace was to be allowed. In October last, the Court of Common Pleas, in the city of New York, held the same opinion, in a suit on a bill drawn here on that city; and the New York banks gave notice, through the newspapers, that they would not receive sight bills for collection unless they were drawn expressly without grace. The writer of this article has been informed that a proposition was subsequently made in the legislature of New York, to provide for the allowance of grace on bills at sight; but that it was opposed and failed, on the ground that it was inexpedient to attempt to give legislative sanction to that which was already the established law. Nevertheless, doubts are still entertained on this subject; and it may not be amiss to inquire what the law really is, and what steps should be taken to charge the drawers and indorsers.

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* This estimate was made several years ago. We shall hereafter give the correct estimate to date.—Ed.

No good reason can be shown why a bill drawn at sight should be due immediately on presentation, while one drawn payable one day after sight is entitled to three days of grace. Grace, as the word imports, was originally granted as a mere favor, by the holder to the drawee, or acceptor, to enable him to procure the funds necessary to pay the bill, and was a matter of great convenience at the time when all payments were made in gold or silver. But this allowance has long since ceased to be merely voluntary on the part of the holder, and the drawee, or acceptor, is as much entitled to it, as the other parties are to notice of protest. It may be considered as almost commensurate with the use of bills of exchange, and constitutes a part of the customary or common law of all commercial countries, except those in which the French code of commerce, of 1807, has been adopted, by which it was abolished.

> "The allowance of days of grace is a usage which pervades the whole commercial world. It is now universally understood to enter into every bill or note of a mercantile character, and to form so completely a part of the contract, that the bill does not become due, in fact, or in law, on the day mentioned on its face, but on the last day of grace. A demand of payment previous to that day will not authorize a protest, or charge the drawers of the bill."—1 *Peters*, 30, 31.

It might well be argued before a legal tribunal, on the high authority of Chief Justice Marshall, who delivered the opinion from which the foregoing extrect is made, that it is only necessary, in order to determine whether grace is to be allowed on a bill or note, to ascertain if it be ot a mercantile character; that is, if it be negotiable, and intended for circulation. For, although the court was not called upon to decide in that case whether sight bills are entitled to grace, yet it is well known that Judge Marshall's opinions were most carefully prepared, and that he announced no legal propositions from the bench which are not supported by reason and authority. The High Court of Errors and Appeals, of Mississippi, made negotiability the test of the question, in the case of Skinner *vs.* Collier, 4 Howard, 396, and decided that grace was to be allowed on a promissory note under seal, because by the law of that State such instruments are made negotiable. A reference to the statutes of several of the States confirms this view. In Ohio, by the act of 1839, it is declared, that all bonds, notes, or bills, made negotiable by the law of that State, that is, such as are for a sum certain, and payable to bearer, or to order, shall be entitled to three days grace in the time of payment. In Massachusetts, by the act of 1824, grace is allowed on bills payable at sight, and on all bills except those which are payable on demand. The legislature of North Carolina, as early as 1786, passed an act providing that bills and notes made payable on demand, should be deemed and held to be due on demand, leaving it necessarily to be inferred that all other bills and notes were to become due at some other time than that mentioned on their face, that is, on the last day of grace. In Louisiana, we have the act of 1805, passed by the legislative council under the territorial government, the third section of which is still in force, and is as follows:

> "That upon ALL BILLS OF EXCHANGE AND PROMISSORY NOTES MADE NEGOTIABLE by law, or by usages and customs of merchants in this territory, instead of ten days of grace which have been heretofore allowed, three days only shall be hereafter allowed, any law, custom or usage hitherto existing to the contrary notwithstanding;" (*Orleans Laws, p.* 98) and the act of 1838, the fifth section of which establishes certain days of public rest, and provides: "That ALL PROMISSORY NOTES AND BILLS OF EXCHANGE shall be due and payable on the second day of grace, when the third is a day of public rest, and on the first day of grace, when both the second and third are days of public rest."—*Acts of* 1838, *p.* 44.

It cannot be presumed that the use of language so general and comprehensive in its terms, by so many different persons, at periods so wide apart, was the result of mere accident; and it is not only a reasonable, but also a necessary conclusion, that those by whom it was used intended that the allowance of grace should apply to all negotiable mercantile paper, without distinction.

The object of this allowance is now, as it was originally, the convenience of the drawee or acceptor; and no question can arise as to his right to claim it on a bill payable after date, or after sight. Now where a bill is drawn at so many days after date, or after sight, the drawee is duly advised of the drawing, or the bill is presented for acceptance, so that he cannot fail to know the time of its maturity, and might, generally, as easily make his arrangements to pay it on the day mentioned on its face, as three days after. His convenience, does not absolutely require this indulgence on such bills, except where they are drawn at short sight, or short date. But bills at sight are frequently presented before a letter of advice would reach the drawee, if one were written; and the first notice he has of the drawing is, ordinarily, the presentation for payment. It may be urged that bills at sight are most generally drawn against funds, and that the drawee should, therefore, be prepared to pay them at any moment: whereas, bills after date, or after sight, are frequently drawn upon the mere expectation that funds will be in the hands of the drawee at maturity to meet them; and that the allowance of grace on such a bill may often enable the drawer to provide for it, and save the drawee the necessity of advancing money, where he intended only to give credit. If this objection, which would apply as well to most bills at short date, or short sight, as to those at sight, is entitled to any consideration, it may be met by the fact that merchants keep an interest account with those who leave funds in their hands, and must of necessity use the money upon which they pay interest; and it is not always convenient, or even possible, to call in outstanding means at a day's warning. The time of the presentment of a bill at sight is altogether uncertain. If it is thrown into circulation the drawee cannot know whether he must be prepared to meet it in three weeks, or in three months, although he may be advised of the drawing; and it might be very inconvenient for him to hold himself in readiness to pay it immediately on presentation. If such bills were in use when the allowance of grace was a mere favor dependent on the will of the holder, surely the drawee might have asked it with much greater propriety upon a bill, of the existence of which he was totally ignorant, until the moment of its presentation for payment, than upon one, of the drawing and maturity of which he was fully apprised, long before it became due, either by the letter of advice, or by his own acceptance.

Writers on Bills of Exchange, such as Chitty, Story, and Bayley, treat the question as settled; and Chancellor Kent, in his Commentaries, says, "the three days of grace apply equally to bills payable at sight, or at a certain time." In a note he says, that it may be considered as a point not entirely settled; and he cites Beawes and Kyd in support of a different rule, although he admits the weight of authority seems greatly to preponderate in favor of the rule as laid down in the text. It may be remarked that the decision of no court is referred to as authorizing or sustaining the rule laid down by Beawes and Kyd, and that it must rest on their simple assertion as a matter of opinion. The following extract from Chitty is conclusive as to the preponderance of authority:

"Beawes, in his Lex Mercatoria, says, that bills made payable here at sight, have no days of grace allowed, although it would be otherwise in the case of a bill made payable one day after sight. Kyd in his Treatise expresses the same opinion. But it appears now to be considered as settled, that days of grace are to be allowed. In Dehers vs. Harriot (1 Show. 163), it was taken for granted that days of grace were allowable on a bill payable at sight. The same doctrine was entertained in Coleman vs. Sayer (Barnard, K. B. R. 303). And in another case, where the question was, whether a bill payable at sight was included under an exception in the stamp act in favor of bills payable on demand, the court held that it was not; and Buller, J., mentions a case before Willes, C. J., in London, in which a jury of merchants were of opinion that the usual days of grace were to be allowed on bills payable at sight. And in Forbes on bills (p. 142), the same practice is said to prevail. And Mr. Selwyn, in his Nisi Prius (p. 339, 4th edition), observes, that the weight of authority is in favor of such allowance. And they were allowed at Amsterdam."

The opinion has prevailed pretty generally, even among those who concede that sight bills are strictly entitled to grace, that custom, or the usage of merchants, has modified the law in this respect. In those States in which there is no legislation on the subject, the allowance of grace depends upon the customary, or common or unwritten law; not resulting from the usage of merchants in any one city, or in any half a dozen cities, but from the custom of the commercial world for several centuries past. In those States which have legislated on the subject, the allowance is extended to negotiable bills and notes generally, and no distinction is made between those which are payable at sight, and those which are payable after sight, or on a future day certain. A custom of the banks in the District of Columbia to allow the whole of the third day of grace, and to demand payment on the fourth day, has existed uniformerly since 1793: such a custom is not in derogation of the commercial law, but is merely explanatory, showing at what time the grace expires; and it has been fully sanctioned by the Supreme Court of the United States. In Woodruff *vs.* the Merchants' Bank of the City of New York, 25 Wendell, 673, a bill of sixty days after date, drawn on and accepted by the cashier of a bank, had been protested for non-payment, without the allowance of grace. It was proven by the president of a bank, and four cashiers, and by a distinguished broker of the city of New York, that it was the usage of merchants in that city to treat such bills as bank checks, and not to allow grace upon them. But the Supreme Court held that the effect of the usage would be to overturn the whole law on the subject of bills of exchange in the city of New York; and that it could not be allowed to control the settled and established law of the State. These examples may serve to show to what extent usages will be recognized by courts of justice. It is only where the law is silent that evidence of custom or usage can be received; and where the law is established, whether it be statutory or written law, or customary or unwritten law, usages must conform to it under pain of absolute nullity. The customary law speaks as plainly in the decisions of judicial tribunals, and in the elementary writers, as the written law does in the code or the statute book. The law allowing grace on negotiable bills and notes, is derived from universal custom, and is as well established where the statutory law is silent, as where it has been made the subject of express legislation. Can bills and notes of a particular class, having the requisite of negotiability, be excluded from the operation of this law by any local usage?

No decision of any court has been found in which it is held that sight bills are to be placed upon a different footing from other bills with respect to grace, while principle and authority both require that they should be as highly favored in this particular, as any other class of commercial paper. If a contrary usage exists, or has existed, it only confirms the opinion of Judge Story (2 Sumner, 377), "that usages among merchants should be very sparingly adopted as rules of law by courts of justice; as they are often founded in mere mistake, and still more often in the want of comprehensive views of the full bearing of principles."

But admitting, for the present, that custom may change the law, let us see if any custom exists disallowing grace on sight bills. In several cases which were recently decided in the Fourth District Court of New Orleans, on bills drawn on New York, the plaintiffs attempted to prove a custom in this city and in New York, to have sight bills paid on presentation, or protested for non-payment, without the allowance of grace. The substance of the testimony of some of the principal bankers and dealers in exchange in this city is, that, until about a year past, grace was not claimed on sight bills payable here, and that the notaries protested them for non-payment, if not paid on presentation; but that latterly the grace had been sometimes claimed and allowed. A gentleman who was a banker and an extensive dealer in exchange, in the city of New York, from 1832 to 1839, says that during that period the grace was frequently claimed and allowed by him. His rule was to protest for non-acceptance and non-payment both; and other witnesses testified that the same practice was observed by them. Several other witnesses, bankers, brokers and notaries, had never allowed the grace, and had not known it demanded. Although these cases were decided in favor of the plaintiffs, they determine nothing as to the question of grace; for there was proof of a promise to pay by the drawer, after notice of the dishonor, and the court very properly held that he was bound by the notice, if the protest was regular, and by his subsequent promise, if it was irregular. So far as New York and New Orleans are concerned, the proof amounts simply to this: that the grace sometimes is and sometimes is not claimed, and is allowed by some and not by others. It is known that grace has been claimed on a bill at sight, and allowed, at Mobile, within the last ten or twelve years; and a strict inquiry would probably show the same want of uniformity in other cities. It will not be pretended that a practice which varies, or which has been interrupted, can be called a custom in the legal acceptation of the term, or that it can be adopted by the courts as a rule of law. Reason and the law require that usages which are to govern questions of right between parties, should be so certain, uniform and notorious, as to be known and understood by those who are to be affected by them.

It may, then, be safely asserted, that no custom exists, that no custom can be proven in reference to this matter, different from the general commercial law; and no such usage as can be respected or adopted by the courts. The question, therefore, must be determined purely on legal grounds; and it is not to be supposed that any respectable tribunal, in deciding it, would disregard the authority of Chitty, Story, Bayley and Kent, and the authorities cited by them in support of their opinion, more especially in Louisiana, where the language of the law precludes the idea of any distinction in the allowance of grace on negotiable paper.

But here it may be asked, why checks and bills payable on demand, should not be equally entitled to grace? As to checks, the obvious answer is, that they are generally drawn upon funds in the hands of a banker, placed with him to be drawn out at pleasure, and on which he pays no interest. They are used as a means of payment, are not intended for circulation, rarely ever do circulate, and, in fact, would be suspected if not cashed within a day or two of their date. They are generally treated as cash, and are not, properly speaking, bills of exchange. In reality, they amount to nothing more than a mandate from the drawer to his agent the drawee, saying, deliver to the bearer, or to order, so much money which you have in your possession belonging to me. Bills and notes payable expressly on demand, or in which no time of payment is mentioned, are commonly for small amounts, and their negotiability is restrained by the suspicion which would ordinarily attach to them if kept in circulation beyond a few days They are, therefore, principally confined to neighborhood or domestic purposes, and do not enter to any great extent into commercial transactions. So that the question is not of much consequence in practice. The universal custom is to treat them as due on presentation; and, whatever the reasons may be which gave rise to the distinction, it is as well settled by the authorities that they should be protested for non-payment immediately if dishonored, as it is that those which are prayable at sight are entitled to grace.

The Supreme Court of Louisiana, in the case of the Commercial Bank of Natchez *vs.* Perry (10 Rob. 63), recognized the doctrine laid down by Story and other elementary writers, that a bill at sight must be presented for acceptance in order to fix the time of payment: for sight is held to mean acceptance, and not the mere physical act of seeing the bill. The allowance of grace does not depend upon the acceptance or non-acceptance of the bill; but if it is accepted, the acceptor may delay the payment until the last day of grace, and a protest for non-payment before that time would not charge the drawers or indorsers. If it is neither paid on presentation, nor accepted, it should be protested for non-acceptance. All difficulty might be avoided by having it protested both for non-acceptance and non-payment; for, if grace is to be allowed, the holder is entitled to the additional security of an acceptance, which, moreover, is necessary to determine the day from which the grace is to be reckoned, and the protest for non-acceptance would bind the parties: if grace is not to be allowed, the bill would be dishonored by the refusal of the drawee to pay it on presentation, and the protest for non-payment would be good.

This article has been extended, perhaps, beyond the patience of the reader; but the subject seemed to merit the investigation. Practically it may make no great difference whether a bill is to be paid absolutely at sight, or three days after; but it is important that the question should be settled. Uniformity in the practice of merchants, in all matters of general commercial interest, is greatly to be desired in a country like ours; and the rights and obligations of parties should not be left to depend upon the doubtful proof of uncertain and varying local usages, of which a large majority of those who are to be affected by them may be entirely ignorant.

AMERICAN CITIES.

1. CINCINNATI—HER POSITION, DUTY AND DESTINY.

[GOVERNOR Bebb, of Ohio, delivered before the Mercantile Library of Cincinnati, an address, from which we make some extracts. His subject is interesting, and he deals with it eloquently in parts. The governor, like some other eminent citizens of Ohio, is fond of seeing little that is great beyond the limits of his own State, and finds in Cincinnati the very expression of highest progress and highest destiny. Now we object not to this State and city pride, so it does justice to others. We are *American* enough to sympathize and rejoice in the fair and legimate progress of every section of our country. The *fair* race, however, should be open to all.

We do not hesitate to publish those parts of Governor Bebb's address, in which he passes so severely upon slavery and upon the influence of slave labor in retarding progress. It will do us no harm to be familiar with opinions, though they be easily refuted, especially when these opinions are held by men as distinguished as the Governor of Ohio. But to *refute* them does not belong to us now. Happily the refutation has come from the halls of the same *Mercantile Library of Cincinnati*, triumphantly, through the manly spirit and independence of Elwood Fisher, Esq., whose able lecture adorns the pages of the present number of our Review.—ED.]

HAS Cincinnati *raw materials* within her reach? She has iron, the substance of which, it has been truly said, the bones of the giant, civilization, are made, in profusion around her. The magnificent forests of Ohio, Kentucky and Indiana, almost fling the shadows of their foliage into her ship-yards. She has the plantations of the South for cotton, and the prairies of the West for wool, with the Mississippi and her hundred arms for her highways.

Has she *food*? She is situated just below the 40° north latitude, in the heart of the temperate zone, and in the center of the lower silurian, or blue limestone region of the West, the most fertile soil on earth, and the most genial to the growth of maize; hence, she has become the great provision market of the world; hence, the profusion of grains and grasses and fruits and vegetables in her markets; hence her exports last year, chiefly of food for man, amounted to fifty-five millions and three quarters of dollars, a sum equal to one-half the average export commerce of the whole Union.

Has she artizans, laborers, men to produce and to consume fabrics? Let her manufactories of iron, brass, tin and copper—of cotton, hemp and wool—of leather, oils, soap and candles—her book trade and printing presses—her ship-yards, iron foundries and machine shops—her beef and pork packing, and, above all, her ten thousand handicraftsmen, tell. Let the value of the products of her mechanical industry, estimated by Charles Cist, Esq., certainly the best authority, at twenty-five millions of dollars per annum, answer.

Has she *motive power?* The Great Miami, with a volume of twenty-five thousand cubic feet of water per minute; Whitewater and the Little Miami, with each half that volume, as actually ascertained at different times of drought, by scientific engineers, all descend at the rate of from five to seven feet per mile. and all by means of canals and railroads, in effect, empty at this city. Dayton has long been known as an important manufacturing point. A hydraulic canal at Hamilton, of four and a half miles in length, gives a fall of twenty-nine feet, and a power equal to the propulsion of one hundred and sixty pairs of 4½ burr mill stones. Similar hydraulic works may be constructed at Middletown, Franklin, Miamisburg, Carrollton, and several other points on all these rivers, at which manufacturing cities and towns, such as Dayton and Hamilton, are springing up as directly tributary to this city as Lowell is to Boston. A consideration of still greater importance to Cincinnati, is the fact that she is situated almost midway between the two greatest coal fields on earth, with the best water communication now, and ere long with railroads, East, West and South, to each.

Is it not apparent that in manufacturing for this valley, Cincinnati and her tributary towns and cities have the advantage of Boston and Lowell, other things being equal, by so much as it costs less to transport a bale of cotton from Memphis to Cincinnati and Dayton, than to Boston and Lowell, by so much as it costs to transport the food from this place to Lowell, to feed the operatives; and by so much as it costs to bring the fabrics from Lowell to the West for consumption. The advantages of our position for the manufacture of iron, in all its great ramifications, is still more manifest, as the mines and coal fields are at our door, and as owing to the great weight of iron as compared with cotton, its transportation is more expensive. Other things, it is true, are not yet equal. New England has the advantage of concentrated capital and skill. But "westward the star of empire takes its way," and both skill and capital are not only finding their way along with it, but they are springing up around and amongst us.

But how is this valley to furnish trade enough and manufactures enough within itself, to make Cincinnati, one hundred years hence, a greater emporium than New York? I have already shown that the probable number of the inhabitants on the Atlantic slope at that time will be sixty millions, and the probable number in this valley, two hundred millions. The proposition, then, is reduced to the plain and easily solved question, whether two hundred millions of people will build up and sustain greater cities than sixty millions. Will it be said that the business of the West will be divided between Cincinnati, St. Louis, Pittsburgh and other cities? True, and will not the business of the Atlantic slope be divided, also, between Boston, New York, Philadelphia, Baltimore, Charleston, etc.? Is not this valley more compact and favorable to the concentration of its trade to one, or to a few points, than the Atlantic slope? What will that point or those points be? There will, no doubt, be several great cities in this valley. Pittsburgh, Cincinnati and St. Louis are now, and I think are likely to maintain, their position, in the front rank. Of these three, Pittsburgh is situated too near the east side of the valley to become the great central emporium. I believe that central point to be Cincinnati and not St. Louis, for several reasons, to one or two of which only, will I direct your attention to-night.

1. Cincinnati, although the younger city, has already nearly doubled St. Louis in population and wealth and productive industry. This is a great *fact* in the history of the two cities, standing boldly out in the foreground of the investigation. It carries with it a significancy that can neither be overlooked, mistaken, nor explained away.

2. But Cincinnati is to be the greatest city, principally because of the absence of slavery in Ohio and its presence in Missouri.

But even in this point of view, the comparative results of slave labor, in contrast with that of freemen upon national prosperity, is a most interesting and important subject for the consideration of the economist and statesman. And I would here furthermore remark, that the world never afforded a more favorable opportunity for making the experiment, or rather for observing the effect of the experiment already made, than these States now present. We here see slave States side by side with free; peopled with the same race, acknowledging the same common origin, speaking the same common language, and united under the same constitution: with a soil more fertile, a climate more mild and congenial, affording products more in demand, and enjoying a geographical position, at least as convenienient for commerce and the arts. Under circumstances thus favorable to slavery, the experiment has been tried for more than a century. What is the result?

In population the free States have far outstripped the slave, and the rapid increase of population is the best index of national prosperity. There is no comparison between the cities, as a glance at Boston, New York, Philadelphia, Pittsburgh, Albany, Buffalo and Cincinnati, in comparison with Baltimore, Charleston, New Orleans, Louisville and St. Louis at once shows. And let it be remarked, that of the latter, Baltimore, St. Louis and Louisville, are but partially under the influence of slavery.

3. In this view of the *position* and *destiny* of Cincinnati, what is her *duty?*

It is, in a word, that she should enlarge her soul to the conception of that position and destiny. Ler her arise, "shake the dew-drops from her garments" and realize the object of her mission upon earth. Let her seize upon all the mighty instrumentalities which the inventive genius of the age has laid at her feet to make the gifts of God, so bountifully strown around her, minister to her coming greatness.

Why does she still pay tribute to the General Government for the boon of passing around the only rapids in her beautiful river? Is that little obstruction forever to *bar* her free navigation of the ten thousand miles of western rivers, which must all be made subservient to her manufactures and commerce? Has she a representative in Congress? Why is his voice not heard? Are the four thousand miles of coast bordering on the Atlantic and Gulf of Mexico forever to monopolize the care and munificence of Congress, and the twenty thousand miles of western river shores and the entire coast of our great Mediterranean lakes to be forever neglected? Is foreign commerce everything, and internal commerce, nine times its amount, nothing? And especially, in view of all this, is the voice of the greatest city in this inland valley not to be lifted up in tones that shall be heard and heeded?

It is the imperative duty of Cincinnati to take the lead in this great measure, and "give not sleep to her eyes nor slumber to her eyelids" until every obstacle to the free navigation of these great rivers, and of the lakes with which she is so intimately connected, shall have been removed. Let her representative in Congress speak! Let her orators and business men cry aloud. Let her omnipotent press put on its panoply. And, if need be, let the ballot-box lend its silent but potent aid, and ere long, rest assured, your rivers may be navigated in safety, and your tempest-tossed mariner on the lakes find a harbor from the fury of the storm!

Again, it is her duty to realize the spirit of the age, and to look it boldly in the face. The locomotive is on his fiery track, ministering to the high behests of civilization. Man, by the Telegraph, now *literally*

> "Stands on our Alps, stands on our Appenines,
> And with the thunder talks as friend to friend,
> And weaves his garland of the lightning's wing
> In sportive twist."

Oceans are no longer the only great highways of nations. The railroad has made the land as subservient to commerce as the water. Railroads are to be the *artificial rivers* of these latter days, and wo to that commercial city that suffers these rivers to be diverted from it. Cincinnati may, by these instrumentalities, if she will, command the Mississippi valley. Her present greatness is already attracting them, and it will require a good deal of neglect and repulsion from her to drive them off; *yet she may do it, and thus dash her golden hopes.*

A large portion of the immense agricultural products of the Wabash Valley are drained off toward New York and Boston, by the Wabash and Erie Canal. Sandusky is extending her arms toward Mansfield and Dayton. She must be met at the latter city.

I had no conception of the importance of a direct communication between

Cincinnati and Chicago, until I visited that young city twice last summer, and traversed much of Wisconsin and northern Illinois, as far west as the Mississippi river. It is a most fertile and delightful country, which, reached by a railroad, would do an immense business at this metropolis. Let, then, the road from Cincinnati to Hamilton be urged forward, and by the time we reach Indianapolis, one branch will tap the Wabash valley, at Terre Haute, on the way to St. Louis, and another, in my judgment, more necessary and important to this city, crossing the Wabash at La Fayette, will unite with Chicago, whence a road to Galena is already partially under contract, and will at an early day be completed.

A road is much needed branching off from the Little Miami Railroad at Todd's Fork, in the direction of the iron mines, coal fields, and salt wells of south-eastern Ohio; and another to connect us directly with the heart of Kentucky and thence with the great system of railroads, now nearly completed, from Charleston and Savannah to Nashville.

If Cincinnati will but enter upon this work with half the energy and enlightened foresight exhibited by Boston, she will at once secure forever, her preponderance amongst the cities of this valley.

I cannot take leave of this branch of my subject without a word in relation to the intellectual as well as physical improvements of Cincinnati. And here, I am proud to say, she presents her noblest characteristic. Young as she is, her institutions of learning, her colleges, her observatory, and especially her common schools, vie even with those of Boston.

In the fine arts, she boasts her Powers, Clevenger, Baker and Jones—her Powell, Beard, Frankenstein, Kellogg, Whitridge and Soule, and a host of others on the road to fame, as the works of art now on exhibition in the gallery of the Western Art Union nobly exemplify.

Of the Young Men's Mercantile Library Association, which I have the honor this evening to represent, it is enough to say that it is but the legitimate emanation of the genius of Cincinnati.

A celebrated orator once emphatically exclaimed, "no matter what race of animals a country breeds, the great question is, *does it breed a noble race of men?*" No matter what its soil may be, the great question is, how far is it prolific of moral and intellectual power. This beautiful thought applies nowhere with so much truth as to a citizen of the United States of America.

2. COMMERCE OF PHILADELPHIA.

The Board of Trade of this city have lately published their annual Report which we obtain from the *Commercial* List.

From the rapidly increasing Coastwise Commerce of the Port of Philadelphia, caused mainly by the Coal Trade, your Board indulge the hope that at the next session of Congress, liberal appropriations will be made for constructing Piers in the Delaware river. This Port has contributed upwards of FIFTY-ONE MILLIONS OF DOLLARS to the General Government, for duties, since 1830, while the latter has not constructed a single place of shelter for vessels during storms, or when ice interrupts the navigation between this city and the Breakwater, a distance of ninety miles. Other ports, which have contributed less to sustain the Government, have received liberal appropriations. In proof of the extent of our Commerce, we find by the Custom-house entries, that the arrivals in 1848 comprised 101 ships, 353 barks, 965 brigs, 3,265 barges, 5,907 schooners, 3,629 sloops, 464 steamboats, and 9,880 boats: making a total of 24,563 vessels; of which 534 were from foreign ports. The Foreign Tonnage entered was 122,154 tons; Coastwise, 2,492,712 tons; total tonnage, 2,814,867 tons.

The supplies of Iron sent forward from the interior of this State, in 1847 and 1848, have been as follows:

1848.—ROUTE	Bar & Sheet. pounds.	Pig & Scrap. pounds.	Castings & Blooms, lbs.	Nails and Spikes. lbs.
Chesapeake and Delaware Canal,	14,988,260	88,713,098	5,536,410	1,370,293
Delaware Canal, Bristol, ...	1,117,515	50,733,874	109,227	*1,338,415
Schuylkill Navigation, ...	10,223,860	29 205,120	3,071,040	1,485,120
Columbia and Reading Railroads,	18,730,700	7,347,400	4,229,705	7,119,600
Norristown Railroad, ...	5,866,288	2,564,108	1,672,780	1,672,785
Totals, ...	50,926,123	178,563,600	14,619,162	12,986,213

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* Including 1,337,225 pounds of Wire.

1847.—Route.	Pig & Scrap. pounds.	Bar, Boiler, & Sheet, lbs.	Castings and Blooms, lbs.	Nails and Spikes, lbs.
Chesapeake and Delaware Canal,	79,593,539	18,058,491	10,172,757	
Delaware Canal, Bristol,	46,558,206	327,852	461,815	
Schuylkill Navigation,	15,963,480	8,442,560	3,339,840	1,966,720
Columbia and Reading Railroads,	14,758,710	20,725,040	1,537,330	8,743,480
Norristown Railroad,	7,902,720	3,184,320	2,262,400	
Totals	164,796,455	60,738,263	17,774,143	10,710,100

The following is a comparative statement of the amount of FOREIGN IRON imported at this port during the last five years:

	1844.	1845.	1846.	1847.	1848.
Railroad, Tons.	8,862.19	2,797.10	73.14	——	383.13
Rolled Bar,	2,732.17	2,433.03	2,244.17	2,736.01	4,124,01
Sheet, rod and hoop,	587.05	197.06	499.06	1,686.12	1,782.16
Pig,	993.18	999.10	226.03	440.18	6,658.18
Old and scrap,	11.08	23.16	26.11	52.11	307.11
Castings,	147.06	84.15	94,17	54.04	71.15
Chains, &c.,	142,10	.08	8.10	152.04	124.09
Steele,	143.03	311.03	287.16	272.17	406.15
Anvils,	58.04	69.05	85.16	68.12	88.15
Nails and Spikes,	10.17	14.05	22.03	23.07	30.08
Hammers,	2.10	2.07	2.19	1.01	4.16
Wire,	4.03	3.02	2.03	3.03	15.18

The following table, prepared from official documents, shows the quantity of Anthracite Coal sent to market annually, from its commencement, in 1820, to 1848, inclusive,

Years.	Total Lehigh. Tons.	Total Schuylkill. Tons.	Lackawanna. Tons.	Pine Grove, Tons.	Lykens' Valley. Tons.	Shamokin. Tons.	Wyoming. Tons.	Total Supply. Tons.
1820	365	....	....	......	....	......	......	365
1821	1,073	....	....	......	....	......	......	1,073
1822	2,441	....	....	......	....	......	......	2,440
1823	5,823	....	....	......	....	......	......	5,823
1824	9,541	....	....	......	....	......	......	9,541
1825	28,396	6,500	....	......	....	......	......	34,896
1826	31,280	16,767	....	......	....	......	......	48,047
1827	32,074	31,360	....	......	....	......	......	63,434
1828	30,232	47,284	....	......	....	......	......	77,516
1829	25,110	79,973	7 000	......	....	......	......	112,083
1830	41,750	89,984	42,700	......	....	......	......	174,734
1831	40,966	81,854	54,000	......	....	......	......	176,820
1832	75,000	209,271	84,500	......	....	......	......	368,771
1833	123,000	252,971	111 777	......	....	......	......	487,748
1834	106,244	226,692	43,700	......	....	......	......	376,636
1835	131,250	339,508	98,845	5,500	....	......	......	575,103
1836	146,522	432,045	104,500	9,978	5,439	......	......	698,484
1837	225,937	523,152	115,387	16,726	6,430	......	......	887,632
1838	214,211	433,875	76,321	16,665	6,005	4,104	......	746,181
1839	222,042	442,608	122,300	19,227	5,372	11,930	......	823,479
1840	225.591	452,291	148,470	19,463	5,302	15,928	......	867,045
1841	*142,807	585,542	192,270	15,306	6,176	22,154	......	964,255
1842	271,913	541,504	205,253	31,437	181	10,098	47,346	1,107.732
1843	267.125	677 313	227,605	22,879	....	9,870	57,740	1,262,532
1844	376,363	840,379	251,005	27,719	....	13,087	114 906	1,623,459
1845	430,993	1,086,068	266,072	31,208	....	10,135	178,401	2,002,877
1846	522 518	1,236,581	318,400	55 346	....	12,646	188,003	2,333,494
1847	643,568	1,572,794	388,200	61,233	....	14,904	289,898	2,970,597
1848	680,193	1,652,834	434,267	56,938	2,000	......	237 271	†3,063,503
	5,505,327	11,859,150	3,392,572	384,625	36,905	124,856	1,113,565	22,417,000

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* Great Freshet which injured the Canal.

† Less Shamokin mines.

The Iron Trade has suffered more seriously, being brought directly in competition with Foreign Iron, which has been selling below the cost of production. Prices have materially declined since 1848. Many of the Rolling-mills in the interior of the State, are not in operation.

Comparative Commerce of the Port of Philadelphia for the years 1845, 1846, 1847 and 1848.

	1845.	1846.	1847.	1848.
Value of Imports,	$7,494,497.00	$8,308,815.00	$12,145,397.00	$11,164,147.00
Duties received,	2,370,517.71	2,420,661.78	2,904,748.97	2,762,093.11

Value of Exports to Foreign Ports annually from 1844 to 1848:

	1844.	1845.	1846.	1847.	1848.
Domestic articles,	$3,326,673	$3,413,928	$4,596,744	$7,936,087	$5,931,413
Foreign "	338,023	502,905	521,310	643,178	
Total,	$3,664,696	$3,916,833	$5,118,054	$8,579,265	$5,931,413

Tonnage entered from Foreign Ports:

American Vessels, Tons	73,705	87,146	107,927	100 294
Foreign "	10,794	12,483	40,144	21,861
Total,	84,499	99,629	148,071	122,155
Arrivals from Foreign Ports, number	387	459	657	534
" " Coastwise Ports,	8,029	6,018	17,083	24,029
Total,	8,413	*6,477	17,740	24,563
Clearances for Foreign Ports	400	458	598	519

The following are some of the principal Imports at this Port during the years 1848 and 1847:

		1848.	1847.
Coffee,	bags	128,048	121,432
Cotton,	bales	45,149	39,665
Indigo,	ceroons	679	1,170
Naval Stores,	barrels	65,974	87,647
Rice,	tierces	5,634	5,094
Sugar,	hhds.	43,012	31,319
Do.	barrels	7,783	15,770
Do.	boxes	35,647	56,866
Do.	bags	41,988	43 416
Molasses, Foreign,	gallons	1,991,921	2,485,738
Honey, "	"	76,466	65,698
Brandy, "	"	249,332	212,666
Holland Gin,	"	58,891	36,589
Wines, Madeira,	"	13	57
Do. Port,	"	19,698	4,421
Do. Teneriffe,	"	31,161	....
Do. Malaga,	"	13,811	30,920
Do. Sicily,	"	6,900	2,843
Do. Claret,	"	3,157	6,637
Do. White French,	"	37,767	26,176
Do. Red "	"	22,222	19,249

The comparative Exports from this Port to foreign countries in 1846, 1847 and 1848, have been as follows:

		1848.	1847.	1846.
Wheat Flour,	barrels	179,507	420,684	366,610
Rye Flour,	"	35 517	20,407	19,730
Corn Meal,	"	140,014	300,531	144,857
Wheat,	bushels	207,092	523,538	215,136
Corn,	"	817,051	1,102,210	277,820
Ship Bread,	brls and kegs	36,084	unknown	unknown

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* Some of the smaller crafts heretofore entered were omitted in 1846.

The Exports of Domestic Goods, Provisions and Fish, from this Port during the past year, have been as follows:

Domestics	packages	6,452	Lard	pounds	3,878,643
Beef	tierces	544	Butter	"	481,190
"	barrels	3,562	Cheese	"	243.875
Pork	tierces	334	Mackerel	barrels	3,713
"	barrels	13,180	Codfish	tierces and boxes	427
Bacon	pounds	4,658,805	"	pounds	741,604

3. SHOE BUSINESS IN LYNN, MASS.

The shoe business is the life of Lynn. Only women's, misses' and children's shoes are made here. Engaged in this business there are of manufacturers, or men who "carry on" the business, 78; of cutters, or men who "cut out" the shoes, 175; of men and boys employed in making shoes, 2,458; of men and boys so employed but living out of town, 900; of women and girls employed in binding shoes, 4,925; of the same so employed and living out of town, 1,660; making of employees an aggregate of 10,058. The number of men and boys employed in making shoes is more than seventy per cent. larger now than it was in 1842. The increase of the number of women and girls employed in binding shoes has, we presume, been correspondingly great. But it should be stated that the shoe business in 1842 was unusually depressed; that much less of it was done during the last than will probably be done during the present year. The number of pair of shoes made during the last year was 3,190,000; the number purchased from other towns was 350,000; making in all 3,540,000 pairs. The cost of the material of these was $1,435,545; that of making them $957,030; making the cost of the 3,500,000 pairs of shoes to have been $2,392,575. The cost of making shoes now is about one-sixth less than it was a dozen years ago.

SOUTHERN AND WESTERN AGRICULTURAL INTERESTS.

1. SKETCHES OF TEXAS.

ALLUVIAL PRAIRIE—SUGAR DISTRICT—CLIMATE.—The agricultural importance of Texas is attracting much attention, and nowhere is the subject more interesting than in this city, which is to be the commercial entrepot of the products of that fertile region. The writer of this article having had the opportunity of making a personal examination of a considerable part of Texas, and of comparing its productiveness with that of other southern States, is enabled to furnish some details that would doubtless be interesting to many. The Sugar region is the low alluvial prairie extending along the coast of the Gulf from the Sabine to the Nueces River, and from the coast into the interior a distance varying from thirty to one hundred miles. The whole of the prairie being, as is supposed, of alluvial formation, is, with the exception of a small proportion, less than the average in Mississippi and Louisiana, susceptible of cultivation, and some portions have a depth of soil and exuberance of fertility that is unsurpassed by the choicest lands to be found on the Mississippi River. The wooded bottoms on the rivers and small streams have the preference, from the fact that by frequent overflows the accretion of vegetable soil is greater than in the open prairie. Nothing, indeed, can exceed the beauty of the forests that skirt the rivers on both sides several miles in breadth, the magnolia, wild peach and cane, being intermingled in profusion, and furnishing evidence of an exhaustless fertility. Such especially is the character of the forests on the Trinity and Brazos. But although a discrimination is made in favor of these lands by most purchasers, so far as it respects the price, yet it is questionable whether the prairie is not, on the whole, more desirable for agriculture in the early settlement of the country. The depth of soil is sufficient—the expense of clearing off a heavy growth of timber is avoided—and the danger to health, which exists in every new country on first turning up the soil by cultivation, is much less. The lands in the vicinity of Galveston Bay have been found well adapted to the raising of sugar. On one plantation between the Bay and Trinity River, a secluded piece of ground in the open prairie, which had been cultivated on an experiment, produced the last season two hogsheads of sugar to the acre, as I was credibly informed. Kennedy states, in his History of Texas, that 3,500 lbs. of sugar to the acre had, within his personal knowledge, been raised on a sugar estate.

A statement was recently published in Galveston, showing the products, during the last season, of six sugar plantations in the neighborhood of the Brazos River, exhibiting an average of one and a half hogsheads to the acre, estimating 1,000 lbs. to the hogshead; but the proportion in some of them was much greater. Indeed the cultivation of sugar is yet in too imperfect a state to admit of an exact estimate of what the capacity of the soil will be under a more improved system of agriculture, such as has been attained on the best plantations in Louisiana. It is a fair result, from all the statistics that I have seen, that under all the present disadvantages of sugar culture in Texas, the average production of the lands under cultivation is 1,800 lbs. to the acre—which, I believe, is greater than the ordinary production of Louisiana estates.

The climate of this part of Texas has been supposed to be oppressively warm; but this is not the case. The range of the thermometer is higher than it is in this latitude, taking the whole season together; but the heat of summer is by no means so prostrating as it is here at the same temperature. Indeed, the summer months are considered in Texas as agreeable, and a residence there during July and August is recommended to invalids as being more salubrious than during winter. This is owing to the constant breeze which comes up from the southeast, and which is so bracing that exercise in the open prairie is not attended with the same dangerous consequences that it is in other parts of the South in the extreme heat of midsummer. Any one, whose habits are good, will find a sense of enjoyment in that climate hardly experienced elsewhere—an elasticity of feeling that incites to enterprise and makes life agreeable. But, in order to attain this, temperance is a requisite; and it is worthy of remark, that the vice of excessive drinking, which formerly prevailed in Texas, has latterly abated under the influence of the Sons of Temperance and the better knowledge of the means of preserving health, and we may hope soon to see the same standard of respectability, in this respect, that we are accustomed to at the North.

SANDOVAL.

2. EXPORTS OF FLOUR, CORN MEAL, CORN AND WHEAT.

The subjoined statement of the export of these articles from the United States to foreign countries, during the years mentioned, and the prices paid at the place of exportation, was obtained from the official reports to Congress, and is copied from the New York *Evening Post:*

FLOUR.			CORN.		
		Prices paid.			*Prices paid.*
Year.	Bbls. exported.	Per bbl.	Year.	Bushels exported.	Per bu.
1840 to 1841	1,515,817	$5 12	1840 to 1841	723,572	54
1841 to 1842	1,283,602	5 74	1841 to 1842	600,308	57
1842 to 1843	841,474	4 47	1842 to 1843	672,608	42
1843 to 1844	1,438,574	4 70	1843 to 1844	825,282	49
1844 to 1845	1,195,280	4 22	1844 to 1845	840,184	49
1845 to 1846	2,289,476	5 23	1845 to 1846	1,826,068	65
1846 to 1847	4,382,406	5 96	1846 to 1847	16,326,050	88
CORN MEAL.			WHEAT.		
1840 to 1841	231,284	2 94	1840 to 1841	868,586	94
1841 to 1842	209,199	2 95	1841 to 1842	817,950	1 12
1842 to 1843	174,354	2 60	1842 to 1843	311,986	75
1843 to 1844	247,882	2 58	1843 to 1844	558,917	89
1844 to 1845	247,882	2 58	1844 to 1845	389,718	86
1845 to 1846	298,790	3 16	1845 to 1846	1,623,795	1 04
1846 to 1847	948,060	4 65	1846 to 1847	4,399,951	1 33

The amount received by the people of the United States during the year ending June 30, 1847, for flour, corn, corn meal and wheat, exported to foreign countries, was $50,879,701, exceeding the amount they would have received at the prices of 1841 and 1845, for a like quantity, upwards of $17,000,000.

SOUTHERN MANUFACTURES AND INTERNAL IMPROVEMENTS.

1. COTTON AND COTTON MANUFACTURES AT THE SOUTH.*

COMPARATIVE COST AND PRODUCTIVENESS OF COTTON, AND THE COST AND PRODUCTIVENESS OF ITS MANUFACTURE: BY CHARLES T. JAMES.

It does not necessarily follow, that, because one man may accumulate wealth by the culture of cotton, and another by its manufacture, one-half the community should engage in the former process, and the other half in the latter. The extent of the business should be regulated by the demand in market. It will then be sound, healthy, and productive. Every bale of cotton made, and every piece of cloth manufactured, beyond this, is so much thrown away, because they serve to lessen the value of the entire product in the ratio of the overplus True, modes of operation may, from time to time, be devised to cheapen the cost of production and this may also increase the demand; because, as a general rule, persons will purchase more of a cheap article than of a dear one. Still, even in this case, the rule holds good; for more of a *cheap* article may be produced than *can be consumed*; and in this case, the business would become as completely profitless and ruinous, as though the article were dear. But there are wants in the community of great number and infinite variety. All want bread, apparel, and other articles of living. All want dwellings. All want furniture for their dwellings. Almost all want articles for ornament. In short, the wants of all are such as to call for the products of a vast many trades and professions; and the great secret of wealth and prosperity, as well as comfort and contentment, consists in the supply of all these wants on moderate terms to the consumer, and at a profit to those who supply them. No one of these results can be attained without a proper distribution of labor, skill and materials, appropriating to each branch of industry its proper share, in order to meet promptly all demands, to proportion prices in the ratio of original cost, and not to overstock the market with any one product. This is also as necessary to the operative and working man as to the employer. As the consequence of an overstocked market, the workingman and operative feel the depression in the reduction of wages, and the consequent curtailment of the comforts of life. Extreme poverty in the masses, is an actual curse to any people, and business should, if possible, be so conducted as to prevent it.

We may now be asked, if the proper application of the elements of wealth will ensure the comforts of the laboring classes as well as the pecuniary prosperity of the employer and the community, how happens it that the manufacturers of Great Britain enrich themselves while a great proportion of the operatives are reduced to a state of absolute destitution? The reply is at hand. As a nation, Great Britain has applied her labor and skill to branches of industry which have proved most productive of wealth; but, as a people, labor and skill have not been properly distributed. It must be recollected that, in England and Ireland, most of the lands are monopolized by a comparatively few persons, in large tracts. Few persons who actually cultivate the earth, have any further interest in the soil they till, than simple temporary leaseholds, at high rents. The consequence is, few farmers are, like ours, able to provide for their children—most of whom, as they become able to do anything, are under the necessity of going to trades, entering manufactories or coal mines, going to service as servants, becoming inmates of the poor-house, begging, stealing, or starving. For this reason, every trade and every manufacturing establishment is overstocked; and as an over-supply of labor, like that of every other article, always reduces its market value, mechanics' and operatives' wages, in England, in the mass, are too low to furnish the merest necessaries of life; while in Ireland, even the tiller of the ground is not near as well fed and cared for as the slave population of the southern States. If land were distributed as in the United States, many thousands, now paupers, would be engaged in raising agricultural produce and provisions for themselves and others, and for the want of which thousands suffer. This would effect a proper distribution of labor. The number of agriculturists would be increased, as well as the necessaries of life—the number of mechanics, operatives, &c., would be diminished, and their earnings enhanced. The monopoly of the soil in the hands of the aristocracy, and the appropriation of vast tracts to purposes of taste, sport and pleasure, prevents all this. Besides, there is the interest on the national debt, nearly $130,000,000, which, with the current expenses of government, makes up in all the enormous sum of $260,000,000, to be paid annually by taxes and customs, which, from whatever source derived to the government, falls at last on the labor of the people. How can it be otherwise, than that a people made, in a measure, the serfs of a landed aristocracy, and having their industry thus taxed, should be otherwise than paupers, or the pauper's next door neighbor?

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* Continued from August Number.

With us, it is different. We have no land monopoly, and no royal bantlings and titled aristocracy to support. With us, persons may consult their own inclinations, and become farmers, mechanics, operatives, or almost any thing else they please. A man may apply himself to one occupation, and if the results do not meet his expectations or his wishes, he may turn his hand to another. The facility with which land is obtained, and its small cost, induce thousands to become farmers, who would otherwise seek other employments. These have no landlords to pocket their earnings, and no national church to suck the life-blood from their veins. They are free, independent, thrifty, and happy. Hence, agricultural products become abundant and cheap, and the mechanic and operative, instead of being reduced to pauperism by extreme competition and oppressive taxation, is able to supply himself with the comforts of life, and with many of what the poor oppressed British workingmen would call its luxuries. The British capitalists apply the elements of wealth so as to create the greatest aggregate product; but in America, though in many cases they might be applied in a more productive manner, yet, in their distribution, they are far more productive of general good than in Great Britain. For this superiority, we have mainly to thank our republican institutions and feelings.

Another important object, in order to operate to the best possible advantage in the prosecution of any productive branch of business, is, that the trade or manufacture should be carried on, at the place where the greatest facilities exist, all other things being equal. Such has been the policy with respect to British trades and manufactures, and such, for obvious reasons, should it be in this country. In Great Britain, they had no cotton, and therefore lacked that facility. The article was to be imported from distant foreign regions, at a heavy expense, as it now is. This was, and ever has been, a great drawback on the profits of the British manufacturer. But, to make up for this drawback, he has an abundance of skill and cheap labor. On the contrary, the grower had the raw material and the labor on his own plantation, but lacked the skill. Without the latter he could not manufacture, and therefore sent his cotton to the British market. By that means he brought into requisition the skill and cheap labor of that country, and thus enabled her to monopolize, at a great profit, at least for a time, the business of manufacturing cotton, and to supply the markets of the civilized world with the manufactured article. In this way the cotton planter has aided the British empire, in making very large additions to the wealth of the nation. Some idea may be formed of the importance of this branch of business in Great Britain, when we state that its various departments embrace nearly one-half of the external trade of that country, and that about a million and a half of persons depend on it for support. Under different circumstances, there might have been a different result. Had the cotton growing regions possessed the British manufacturing skill, and found it more profitable to manufacture the raw material than to dispose of it in a foreign market, little, if any more, would have been produced than could have been manufactured at home. Great Britain would then have been deprived of the material, one of the essential elements of her great wealth, and which she could neither have produced nor purchased. At this time, she would have by no means been what she is, in point of wealth and greatness. The cotton growing regions would have saved to themselves the amount paid on their produce, for profits, commissions, freights, insurance, &c. and, till within a few years past, heavy duties in British ports. They might have supplied every market in the world with the manufactured fabric, and thereby have realized the profits accruing from the manufacturing process, as well as from that of culture. Considering the vast amount of wealth created in Great Britain by the manufacture of cotton, what might now have been the condition of our own States, and especially those of the South, had all our cotton been wrought at home, instead of being, in its raw state, transported across the Atlantic for a market. In order to illustrate this point, we will refer to British statistics.

Except a comparatively small quantity in the East Indies, and an inconsiderable quantity in the West Indies, no cotton is produced in the British dominions. That raised in the East Indies has to be transported twelve thousand miles, to reach the manufactory. In fact, the entire quantity of cotton supplied to the manufacturers of Great Britain, from all the world except the United States, is less than one-fifth part of the actual consumption. The remainder is supplied by our own cotton growers. In the year 1840, there was entered, at the different ports in the kingdom, 592,965,504 pounds. The United States furnished 488,572,510 pounds—more than four-fifths of the whole. Of the above quantity (592,965,504 lbs.) 531,197,659 pounds were entered for home consumption—the remainder, for re-exportation. Suppose the above to have been all the cotton raised in the world—Great Britain must then have curtailed her manufacturing operations four-fifths, provided the United States had manufactured all their own cotton; that being somewhat less than the proportion furnished by them.

On the supposition here stated, had all the cotten exported from this country to Great Britain been manufactured here, under circumstances similar to those connected with manufactures there, it is quite evident that the amount of wealth there created by the business, would have been added to the wealth of our own country. It may be said, there are cotton growing countries, besides the United States, and manufacturing countries in Europe, other than Great Britain; and that, consequently, the American cotton planter and manufacturer could not monopolize the market of the world. Hence it will be said, Great Britain could derive supplies of cotton from other sources, and, with other manufacturing countries which could do the same, still control the markets. All this is more easily said than done.

2. DE KALB FACTORY, SOUTH CAROLINA.

There has been so little said about the DeKalb Factory and its various improvements, in the public prints, that it is often overlooked as an evidence of southern skill and enterprise. A visit to the Factory a few evenings since enabled us to gather the following facts, which we give our readers, as much to show the energy and enterprise of the *Monumental Town*, as to prove that the South can embark with success and profit in that channel of human industry.

The stock is divided into four shares; Thos. Lang, Thos. J. Ancrum, and William Anderson, owning each a share; the fourth is owned by A. Young, and William Gardner, the skillful superintendent, whose personal attention is constantly given to the various branches of the establishment. The Factory was established in 1838, with 1,000 spindles, for making *yarn*, but up to 1846 they were gradually increased, so that now they nearly double that number. 1,680 spindles and 40 looms now run daily, making *yarn* and cotton *osnaburgs*, and consuming cotton equal in amount to a mill of three or four thousand spindles, according to calculations usually made at the North.

The annual consumption of cotton is about 360,000 pounds. Last year over 1,000 bales were consumed, and during the past month 99 bales were worked up, making 8,205 pounds *yarn*, and 47,953 yards *osnaburgs*. The *osnaburgs* weigh half a pound to the yard, and are well known in the northern and southern markets—and we learn from one of the Company, that they always commanded a higher price than those made at the North. The monthly expense of the establishment is something less than $900. Most of these figures were taken from the Books of the Company, and can be relied on as being correct.

There are about twenty weavers employed, all white females, each one attending to about two looms—one or two to more—and each receiving wages from twelve to twenty dollars per month—an amount far greater than they realized before their connection with the Factory, and sufficient to secure the necessary comforts of life, and create a small sinking fund if desired. For several years past, *blacks* were the principal operatives, except in the department of weaving; but *white* operatives are now generally employed, because they are less difficult to procure. The *blacks* have been discharged, except about thirty that belong to the Company—the *white* operatives number now seventy-two, male and female. We are informed that the experience of the Company is, that the *blacks*, as operatives, can compare favorably with the *whites*, and under some circumstances may be preferred. We believe the Company have never realized less than ten per cent. upon their capital, but they have constantly invested the profits in additional improvement, so that the sum now invested is about double the original stock.

The enterprising proprietors have not confined their operations to making *yarn* and *osnaburgs*, but use their immense water power to drive other machinery. A Grist Mill brings to the Company one thousand bushels of corn in toll, and the Mill to grind bark, supplies an extensive Tannery at hand, where large quantities of good leather are prepared. In connection with the *tannery*, a Shoe Factory has been in operation for some years, where an excellent article of *negro* shoes, pegged and sewed, is made, of which thousands are sold annually, far superior, we believe, to the northern made shoe sold at the same price. The workmen belong to the South, and use leather tanned at their very door. It is truly gratifying to observe such unmistakable evidences of southern enterprise, and the important duties taught the South, by their success in so many departments of human labor.

The Factory Village, where the operatives reside, is pleasantly situated. One hundred and fifty-four constitute the white population, and their neat cottages and thriving gardens present a handsome appearance, indicative of comfort and contentment.

The moral and mental culture of these families receive great attention. A daily school for their children is kept through the week, and at eight o'clock every Sabbath morning members of the various churches in town meet them in Sunday School, which we are informed is well attended by old and young, and is in a highly prosperous condition. But this is not all.

On every Sabbath evening at five o'clock, some one of the divines in town, preaches in their newly erected place of worship, This duty is performed by the preachers alternately, and we believe they never fail to meet a full congregation. We are told that this little *Village* can well compare, in point of morals and good order, with any in the Union, of the same size, and doubtless much of it is attributable to the interest manifested by the church in town in their spiritual welfare.

If the example of this energetic Company, in carrying on successfully various departments of mechanical industry, were judiciously followed throughout the country, *non-intercourse* with the North would not appear so utterly impracticable as some have imagined it; and the South, prospering in the rapid development of her resources and energies, would steadily advance in wealth and importance, self-sustained and independent of the world.—*Camden Journal.*

3. MOBILE AND OHIO RAILROAD—No. 2.*

"The survey of the entrance to Mobile Bay proves that remarkable changes have taken place since the survey by Major Kearney, United States Topographical Engineers, in 1822, and that by Major Ogden, United States Corps of Engineers, in 1841." "In 1822 the greatest depth which could be taken over the bar was seventeen feet; in 1841, it was nineteen feet; in 1847, it was twenty and three-quarter feet, each at mean low water." "With the present depth, our heaviest steam frigates can enter and find secure anchorage in Mobile Bay; and, should the depth continue to increase in the same ratio it has for the last six years, it will not be long before our largest frigates may do so also."

While the entrance to this harbor is in a state of transition, that of Pensacola is supposed to have arrived at nearly its stationary point; so that, at the present ratio of progression, in a few years, a greater depth may be carried over the bar into Mobile Bay, than into any other harbor of the Gulf. At present, ships of large tonnage are compelled to anchor in the bay, about twenty or twenty-five miles below the city, and employ lighters to receive and discharge their cargoes; as vessels drawing more than eleven feet cannot come to the wharves. Mobile River is divided, a few miles above the city, into several channels, one of which debouches at Mobile, while a larger body of water (Spanish River, as it is named,, diverges to the east, and empties into the bay on the opposite side of the island which it forms. By erecting a dam or pier at the head of this island, across Spanish River, it is believed that the whole may be made to flow in a single channel past the city and find its outlet into the bay at that point. This would produce a current sufficiently powerful to wash out the channel speedily, and, with a moderate expenditure, water enough could be obtained to bring at all times the largest ships to the wharves.

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* Continued from September number.

Mobile is more accessible from the Gulf than New Orleans. She is nearer Havana than either New Orleans or Charleston, and is better situated than either of those cities for supplying the great valley with West India products. A central position on the Gulf—an elevated and healthy location—an abundant supply of pure water—the best harbor on the coast ; all these elements combine to make Mobile the most favorable point that could be selected for the terminus of a great trunk, like the projected railway to the Ohio.

To a private citizen of Mobile, M. J. D. Baldwyn, Esq., belongs the honor of originating this magnificent project. The continuous and rapid diminution of the trade of Mobile with the interior for several successive years, the marked change in the character of that trade, and the inevitable transformation, not far distant, of one of the most active commercial cities of the South, into a mere depot for the storage and transhipment of cotton bales, had forced upon the consideration of reflecting men an inquiry into the causes of this depression, and by a natural sequence led them in quest of a remedy for the evil. The active mind of Mr. Baldwyn was the first to comprehend the immense importance of a railway connection between the Ohio and Mississippi valleys and the Gulf of Mexico, and the favorable position of Mobile for its southern terminus. Undismayed by the magnitude of the project, he sought to enlist the public feeling in its behalf, and soon succeeded in awakening a deep interest among his fellow citizens. This resulted in a call for a public meeting, which was held accordingly in the city of Mobile on the evening of January 11th, 1847, and was numerously attended. From that period may be dated the birth of this gigantic enterprise.

Tennessee was the first State to bestow a charter upon the Mobile and Ohio Railroad Company ; and with a just appreciation of the true interests of her people, she sought to encourage the prosecution of the work by the most liberal provisions, and accompanied the instrument with a noble testimonial of favor, in the shape of a State subscription of over $600,000. The legislature of Alabama soon after passed an act incorporating the Company, with a capital of $10,000,000 ; which was followed by Mississippi and Kentucky, with grants of the right of way through those States, and an extension of all the chartered privileges appertaining to the company under their act of incorporation in Alabama. In May last, books were opened in Mobile for subscription to the capital stock, and in twenty days the sum of $650,000 was subscribed in that city. The company was then organized by the election of president and directors, who are actively engaged in the prosecution of the necessary steps preliminary to the commencement of the work. Having thus briefly alluded to the inception of this great enterprise, and its progress to the present time, we proceed to examine its merits as an investment for capital.

A careful examination of the country has been made by Lewis Troost, esq., engineer, whose reconoissance has resulted in the discovery of the entire feasibility of the project, and in the recommendation of the following, as the most favorable route :—Commencing at Mobile, the route proposed extends up the valley of the Chickasawbogue, until it strikes the dividing ridge between the Tombigbee and Escatawba rivers—follows this ridge to the head of the Escatawba—from thence, continuing its general northerly direction, and passing near the towns of Marion, Macon and Aberdeen, Mississippi, to the Tennessee River, in the State of Tennessee, below the Big Bend Shoals, a distance of about 340 miles from Mobile. From thence, through the towns of Jackson and Trenton in Tennessee, and Moscow in Kentucky, to its terminus on the Mississippi River, at the town of Columbus, Kentucky, 16 miles below the mouth of the Ohio River, and 470 miles from Mobile.

This will be the longest railroad in the United States under a single charter. Great as is its length, however, the general surface of the country is so singularly adapted to its favorable construction, that the route need vary little from an air line connecting the termini. The absence of large streams (the longest bridge required being over Obion River, in the State of Tennessee, about 180 feet span), the freedom from all obstacles in the way of heavy rock excavations, as shown by the reconnoissance of Mr. Troost, the abundance of suitable timber, the light grade, which is either level, or descending toward the Gulf, in the direction of heavy freights—these are characteristics which are seldom found united, but which exist here. From these facts, it may well be doubted whether a railroad of considerable length could be built between any other two points in the United States at as small a cost per mile, or one capable of transporting freight and passengers at as cheap a rate with profit to the stockholders.

By comparing Mr. Troost's report of the topographical character of the country upon the route of the Mobile and Ohio Railroad, with the cost of other works already completed in the South, in sections presenting similar general features, we are enabled, in the absence of an accurate instrumental survey,* to make a reasonable approximation to the amount required to construct and equip this road, ready for business. The following estimates, made upon this basis, it is believed, will be found to exceed, rather than fall short of, the actual cost of this work:

Cost of grading (including bridges and culverts) ready for superstructure, 470 miles, at an average of $3,500 per mile, ...	$1,645,000
Cost of superstructure, counting the rail at 56 pounds to the yard, and the iron at $65 per ton of 2,240 pounds, including depots, water stations, side tracks, &c., &c., at $9,780 per mile, ...	4,596,600
Cost of locomotives, freight, baggage and passenger cars, &c., &c., to place the road in efficient working condition, say	400,608
Total cost of road and equipments, ...	$6,850,000

Being a little over $14,500 per mile.

This railroad, when completed, must depend upon the following sources of revenue:

1st. The travel and freight supplied by the country along the line.

2d. The through travel, and such portion of the freight passing between the mouth of the Ohio River and the Gulf of Mexico, as can be diverted to the railroad from the Mississippi River.

3d. The transportation of the mails.

First. The local trade and travel. The following table, prepared with care, and based upon the estimates derived from Patent Office Reports, and other reliable sources, exhibits the population and resources of the country through which the Mobile and Ohio Railroad will pass, and the adjacent sections, which will be dependent upon and furnish traffic to that road:

POPULATION AND PRODUCTS OF COUNTRY ON THE ROUTE OF MOBILE AND OHIO RAILROAD IN 1847.

Twelve counties in Alabama, namely, Mobile, Washington, Choctaw, Sumpter, Pickens, Fayette, Franklin, Lauderdale, Lawrence, Limestone, Madison, Morgan:

Population, ...	241,500	Pounds of wool, ...	190,000
Bushels of wheat, ...	450,000	" tobacco, ...	177,000
" corn, ...	10,400,000	Number of horses and mules, ...	55,500
" oats, ...	686,600	" neat cattle, ...	222,200
" rye, ...	26,250	" sheep, ...	108,150
" potatoes, ...	394,000	" swine, ...	598,000
Tons of hay, ...	3,000	Poultry, value, ...	$173,100
Pounds of cotton, ...	71,000,000		

Nineteen counties in Mississippi, namely, Attala, Chickasaw, Choctaw, Clark, Itawamba, Kemper, Lafayette, Lauderdale, Lowndes, Monroe, Neshoba, Newton, Noxubee, Oktibbeha, Pontotoc, Tippah, Tishamingo, Winston, Yallabusha:

Population, ...	227,500	Pounds of wool, ...	130,200
Bushels of wheat, ...	372,300	" tobacco, ...	130,000
" corn, ...	5,604,500	Number of horses and mules, ...	57,500
" oats, ...	450,300	" neat cattle, ...	275,000
" rye, ...	7,650	" sheep, ...	65,100
" potatoes, ...	341,600	" swine, ...	528,300
Tons of hay, ...	350	Poultry, value, ...	$212,700
Pounds of cotton, ...	67,500,000		

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* Such a survey will be commenced early in November, under the direction of John Childe, esq., as Chief Engineer. [For this survey, see Com. Rev., July, 1849.—Ed.]

Twenty counties in Tennessee, namely, Benton, Carroll, Dyer, Fayette, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Hickman, Humphreys, Lawrence, McNairy, Madison Obion, Perry, Stewart, Wayne, Weakley:

Population,	258,100	Pounds of wool,	502,100
Bushels of wheat,	2,625,000	" tobacco,	15,874,200
" corn,	14,804,350	Number of horses and mules,	96,500
" oats,	1,884,400	" neat cattle,	295,400
" rye,	54,600	" sheep,	251,500
" potatoes,	648,000	" swine,	1,047,600
Tons of hay,	8,100	Poultry, value,	$239,200
Pounds of cotton,	18,270,000		

Six counties in Kentucky, namely, Ballard, Calloway, Graves, Hickman, McCracken, Marshall:

Population,	34,200	Pounds of wool,	92,300
Bushels of wheat,	228,000	" tobacco,	2,550,000
" corn,	2,180,000	Number of horses and mules,	14,850
" oats,	634,500	" neat cattle,	33,150
" rye,	13,250	" sheep,	46,150
" potatoes,	90,500	" swine,	105,500
Tons of hay,	1,950	Poultry, value,	$27,500
Pounds of cotton,	550,000		

RECAPITULATION.

Population,	761,300	Pounds of wool,	914,000
Bushels of wheat,	3,675,300	" tobacco,	18,671,200
" corn,	32,988,850	Number of horses and mules,	224,350
" oats,	3,664,800	" neat cattle,	825,750
" rye,	101,750	" sheep,	470,900
" potatoes,	1,474,100	" swine,	2,278,400
Tons of hay,	13,400	Poultry, value,	$652,500
Pounds of cotton,	157,320,000		

These fifty-seven counties embrace an area of more than 35,000 square miles, and comprise within their limits some of the most fertile lands of the South. Much of the country is remote from market, and, consequently, is comparatively new and unsettled. The stimulus given to the growth of these districts by the construction of a railroad through them, would fill them up rapidly with an active population, which would furnish a constantly increasing traffic to the road. If we may be allowed to judge of the local support that would be rendered to the Mobile and Ohio Railroad, from a comparison with the population and resources of districts traversed by other railroads, and the business they create, we must conclude that this source of revenue alone would yield a moderate income to the stockholders.

4. MINERAL RESOURCES OF ARKANSAS.

There can scarcely be mentioned a single ore or mineral which is not found in our State. Iron, copper, lead, tin, silver and gold; limestone and marble, for useful and ornamental purposes; roofing slate and other durable materials for construction; sands for the manufacture of glass; clays of all grades, from those suitable for the finest porcelain, down to the common brick; salt and alum, marls and other mineral manures, proper for the improvement of the soil, etc., all scattered far and wide throughout our State, and all lying like so much waste material, because we lack the enterprise to make a single effort to give publicity to these facts in such a manner as will attract attention from abroad!

There is probably no other State in the Union, more plentifully supplied, with more valuable deposits of iron; and yet, while the citizens of other States are amassing wealth by their furnaces and forges, there is not, we believe, a single furnace in operation within our limits. In the northern portion of our State, in the White river region, where the facilities for water power are without limit, and where the means of transportation are as convenient as could be desired, the beds of iron are inexhaustible, copper is abundant, and silver has lately been discovered in considerable quantities.

The only point at which lead is successfully mined, is in the vicinity of this city; yet from the discoveries that have been made, it is believed that the practiced eye of a geologist would be enabled to detect throughout the vast region between these "diggins" and the northern boundary of our State, many locations where this valuable ore might be profitably raised.

In the mining operations now going on near the city of Little Rock, one cannot help admiring the energy and perseverance with which the hidden treasures are sought for and obtained. But a few months ago, a small parcel of ore taken from the bed of a branch, was all that was visible; now the earth literally groans under the weight of the immense masses of ore piled upon its surface. At the vein recently discovered, two miners have taken up at least eighty or ninety tons of mineral within the last four weeks, a large proportion of which is argentiferous lead ore. This makes three regular and well-defined veins, proven to be of great value, besides eight or ten others in prospective, all discovered on an area of not exceeding two acres. The same indications that exist at these mines, present themselves over a vast extent of country, as yet entirely unexplored.—*Arkansas Democrat.*

EDITORIAL NOTES, ETC.

1. BARNWELL'S TRANSLATION OF GIRARDIN.

Lectures on Dramatic Literature, or the Employment of the Passions in the Drama, by Saint Mark Girardin, translated from the French by Robert G. Barnwell, of New Orleans. New York, Appleton & Co.; New Orleans, J. B. Steel, 1849.

The moral of this work is excellent, and it admirably contrasts the ancient and modern dramatic schools, showing the peculiarities of either. The passions are analyzed and compared with profound critical discrimination, and every thing false in their exhibition justly censured. When it is reflected that in all times and in all countries the drama has been illustrated by the highest efforts of human genius and power, we can well imagine the discussions and criticisms of the work before us to possess the keenest interest and to be replete with the most valuable instruction.

Mr. Barnwell, whom we are pleased to acknowledge as a warm personal friend, has performed with fidelity the duties of translator, and will, we hope, be compensated for his labors by a liberal public. The chief defect that we have noticed in his work, is a too literal rendering of language into language, which has the effect of marring occasionally his otherwise most excellent English.

2. NOTT ON THE PHYSICAL HISTORY OF MAN.

Two Lectures on the Biblical and Physical History of Man: delivered by invitation from the chair of Political Economy, etc., of the University of Louisiana, in December, 1848, *by Josiah C. Nott, M. D., of Mobile. New Orleans, J. B. Steel—B. M. Norman, etc.,* 1849.

Having invited Dr. Nott to deliver these lectures before our chair in the University, regarding the science of Political Economy incapable of completion without some reference to the natural history of man, we regretted the unfavorable circumstances which prevented a large attendance, and requested Dr. Nott to commit them to print for the benefit as well of the public at large as for that of the intelligent audience who were present. Dr. Nott has complied with the request, and the elegant volume before us is the result.

Ethnological researches, or those relating to the mental and physical differences between mankind, are now being prosecuted in Europe and this country with great zest and ability. Many new and remarkable facts and principles are being developed which must in time have great influence upon the systems of economy and legislation which are formed. If the *unity* of the human race, meaning their common origin from one parent stock, ever falls to the ground, it is evident, unless we favor the "bed of Procrustes," many of the principles now deemed *universal* must go with it. We are not afraid of truth, from any quarter or on any subject, whatever may be the result. Man's progress is only truly onward, when error is dissipated in his path.

Hereafter we shall make some valuable extracts from these lectures, which relate to the *Negro* as a distinct race incapable of assimilation or unassisted progress, and which show up the absurdities and wickedness of the abolitionists and their schemes in colors which are unfading.

Dr. Nott does not desire, but does not fear discussion and criticism. He separates himself in no wise from the Bible, but claims for his views a perfect harmony with it in all those points where that sacred work undertakes to teach and where it is correctly expounded. It will be remembered that several years ago Dr. Nott, who is at the head of the medical profession of Mobile, conducted through the pages of the *Southern Quarterly Review* an elaborate and protracted discussion upon these points, in which he asserted, defended and maintained, his position with great strength of reasoning and erudition. The present volume is a further expression of the subject, aided by the new light which it is every day receiving.

3. M'CULLOH ON SUGAR, ETC.

Reports in relation to Sugar and Hydrometers, by Professor R. S. M'Culloh, Philadelphia, 1849.

We are indebted to Professor M'Culloh for a handsomely bound copy of the new edition of his Sugar Reports, containing much additional matter. As we have no doubt that this work will be extensively circulated in Louisiana, it will not be necessary for us to enter into any analysis of it, which has indeed in the old edition been pretty well done already. It contains a vast quantity of information upon the subject discussed, taken in every point of view, and we take to ourselves some credit in being the only periodical in America addressed to the sugar interests—being the first, too, to advocate them. In the work of Prof. M'Culloh will be found, perhaps, one hundred references to the volumes of the *Commercial Review*, and the able practical writers it has furnished. Should not this stimulate the sugar planters to extend us a hearty support, which has, alas! been never yet vouchsafed? We have even lost support from other sources by talking too much about sugar.

4. FENNER'S MEDICAL REPORTS.

Prospectus of a volume to be published annually of Southern Medical Reports; including the subjects of Meteorology, Medical Topography and Diseases, by E D. Fenner, M. D., of New Orleans.

We wish all success to this proposed enterprise from our friend, Dr. Fenner, who is one of the most energetic, laborious and useful medical writers of our times—who was one of the parents of the New Orleans Medical Journal, long one of its editors, and always first among its contributors. We commend him and his labors to the courtesies and support of the profession.

5. TO SUBSCRIBERS AND CONTRIBUTORS.

We beg those who are indebted for the old series of the Review, or for the volume which is now in course of publication, to remit us promptly their dues through the mail, without waiting for the call of an agent, which is always an expense to us of twenty-five to thirty per cent., and which takes away almost all the profits of the Review. If our subscribers would pay us in this way, it would be easier to them, prevent us from being ever embarrassed, and enable such improvements to be put upon the Review as would soon carry it to highest perfection. They may send bills of any good bank, or an order upon New Orleans factors. Let us beg, too, that each will exert himself to add to our lists at least one new subscriber.

We have on hand for the next number several able articles, and assure all who have not yet been attended to, that their time will soon come. After a short absence, the editor will be again, he trusts, at his post in New Orleans, very long before the appearance of this number, and will remain there steadily, except to attend the Memphis convention, until next August.

The circulars of the Census Board and the Patent Office, Washington, have been received and will be attended to.

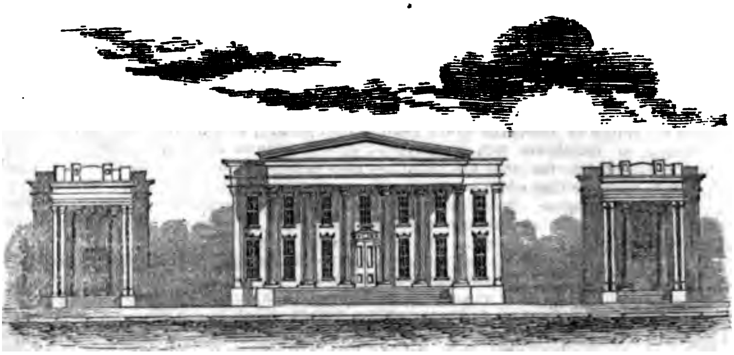
6. TO THE PLANTERS.—SUGAR AND COTTON.

The importance of an AGENCY in New Orleans in connection with the Review, to aid the planters in the *purchase and sale of estates*, has frequently suggested itself. We have determined to start it. As the Review circulates largely in all the southern and western States, and is now getting a northern circulation, planters will have an opportunity of offering their estates to the best advantage. They will be charged for the advertisement of estates, according to the space occupied, and time advertised, *on reasonable terms*, in the pages of the Review, as will be agreed upon. When sales are effected through the AGENCY, the usual commission will be charged. *Editorial notices* will be called to the estates. Messrs. H. Weld & Co., publishers of the Review, able and energetic business men, will take *exclusive* charge of this department. In the present number we call attention to a large plantation in Attakapas, Louisiana, among our advertisements.

☞ All letters relating to the business of the Review will be directed to Weld & Co., New Orleans; all relating to editorial, to J. D. B. De Bow, care of Weld & Co., publishers Commercial Review, New Orleans.

7. OUR BOUND VOLUMES COMPLETE.

We have still a few sets remaining of the Old Series of the Commercial Review, in handsomely bound volumes, 1846—1849. We wish those of our subscribers who have not the work complete would order them, or have them taken by the public or private libraries in their vicinity. In a short time it will be impossible to obtain them on any terms, as the edition printed was small. We are anxious to distribute the volumes, and will deliver them at any points.



COMMERCIAL
AND
AGRICULTURAL COLLEGE,
OF THE
UNIVERSITY OF LOUISIANA.

New Orleans.

1849.

Session from third Monday in November until the third Monday in May, twenty-six weeks.

Administrators of the University.

Ex-Officio: { HONORABLE ISAAC JOHNSON, Gov. of the State of Louisiana,
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* There will be a Summer Term in the Collegiate and Military Institute of Kentucky, near Frankfort, for such Students of the University of Louisiana, who may desire to spend their summers in that fine climate and obtain the advantages of that excellent Institution. Such Students will pursue their studies, with some additional ones, and have the benefit of *Military Instruction*. The expenses are quite moderate, as will be seen by reference to the Circular of the Institute, which was published in September No. Review, 1849.

The instructions in this branch of the University established under the endowment of

MAUNSEL WHITE, Esq.,

Will embrace

LECTURES AND INSTRUCTIONS.

I.—A *Course of Lectures upon Political Economy, Commerce and Statistics.*—The course of instruction will be conducted by oral lectures and examinations. Though primarily intended for the large and important class engaged in, or preparing for, commercial life, it is at the same time addressed to all who are pursuing a liberal education, with a view to any of the professions. No subject can be more generally interesting and important than those which relate to the industry, resources, and wealth of nations, and the laws which influence their progress or decline. The course will embrace:

1. Relations of Governments and Industry; Sources of National Wealth and Progress, etc.; Production, Distribution and Consumption of Wealth.

2. History and Progress of *Commerce*—its Principles and Laws: Home and Foreign Commerce; Tariffs, Treaties, Life Insurance; Roads, Canals, Shipping and Revenue; Systems of Reciprocity. Balances of Trade; Mercantile and Navigation Systems; Colonies and Colonial Systems; Banks, *Finances*, Accounts, Transportation, Book-keeping, Principles of Merchant Law: Commerce of Nations, Ancient and Modern: Geography of Commerce; Commodities of Commerce: Literature of Commerce, etc.

3. Progress and Results of *Agricultural Science*; Principles of Agriculture; Comparative Condition of Agricultural, Commercial and Manufacturing Communities; Statistics of Agriculture, etc.

4. Origin and Progress of the *Manufacturing System*; its relations to the other pursuits; Invention and Machinery in Manufactures; Condition of the Manufacturing Classes; Statistics of Manufactures, etc.

II.—A Course of Lectures upon *Chemistry applied to Agriculture, Arts and Manufactures.*—Gases, Organic Substances, Acids, Organic Elements of Plants, Food of Plants, Inorganic Constituents of Vegetables, Nature and Origin of Soils, Rocks, etc., Chemical Constitution of Soils, Improvement of Soil by Art, by Chemistry; Manures, Organic and Animal; Produce of the Soil, etc.; uses of Chemistry in the various branches of Arts and Manufactures, etc.

III.—A Course of Lectures upon *Commercial and Maritime Law and Mercantile Usages.*—Commercial Law, as it relates to Mercantile Persons, Property, Contracts, Remedies, Partnerships, Corporations, Bills of Exchange, Freight, Average, Insurance Sale, Guarantees, Lien, etc.

IV. A Course of Lectures upon *Geology, Mineralogy, Botany and the Analysis of Soils and Products.*—Descriptive and Practical Geology: Composition of Rocks, Stratification, Formations, Series and Periods, Metalliferous Veins, Fossils; Classification, Distribution and Analysis of Plants; Specific Gravity Soils, Various Analyses, Earthy and Mineral Substances in Plants, Saline Matters. Clays, Sand, etc.

V.—A Course of Lectures upon *Modern History, Constitutions and the American Government.*

VI.—A Course of Lectures upon the *Theory of Numbers, Commercial Accounts and Calculations.*

VII.—Practical and daily instructions in *Book keeping* by double and single entry in all its applications; opening and closing regular Mercantile Books; Penmanship.

VIII.—General Discussions upon *Criticism, Rhetoric* and the Art of *Composition.*

IX.—*The French, Spanish and German Languages.*

Lectures daily, with oral instructions and rigid examinations. Each Student to be supplied with Text books in the different departments.

Students preparing for Mercantile life will not be required, unless it is preferred, to attend the Agricultural Lectures. Agricultural Students will have a similar option about Commercial matters; although it is desirable every Student should attend *all* the Lectures.

Students attending the Institute *two years* and standing all necessary examinations, receive their regular diploma.

TERMS.—	For the annual session, in all departments, ...	$65
	Modern Languages, extra (session), ...	10
	Single Course of Lectures in either department, ...	10 to 20

☞ Payment on the opening of session or within six weeks afterward.

Board can be obtained, in respectable families, in New Orleans, from four to five dollars per week; and parents and guardians are requested to make the necessary arrangements through their friends or factors in the city.

Attached to the College is a Library and Reading Room, containing all the Commercial, Agricultural and practical Periodicals, Newspapers, etc., published in this country, England and France.

The advantages of business experience in New Orleans, from its great trade, are unrivalled. Here are the practical daily illustrations of all teachings. A great city only can give these.

The Buildings of the University are of the most spacious character, and it embraces a flourishing Law and Medical School, and a Preparatory Department in the Classics and Mathematics.

ADVANTAGES.

THE OBJECT OF THE

COMMERCIAL AND AGRICULTURAL COLLEGE

OF LOUISIANA,

Is to prepare young men for practical life and success in the callings upon which they may engage. It is the first Institution of the kind in the country and in keeping with the spirit of the present age. It will be remembered that Abbott Lawrence, by a splendid endowment, added but lately to Harvard College a department of Engineering, Arts and Manufactures, and that Agricultural Chairs have been connected of late with many of the leading American Colleges. In Europe, they have the schools of Liebig, Rosa, Mulder, etc. The Smithsonian Institute at Washington, has one distinct department of *Agriculture*, *Commerce*, *Statistics*, etc.

Several years ago, a convention of the Southern and Western Merchants, held in Augusta, Georgia, declared:

"That this convention cannot but view with deep regret the neglect of all Commercial pursuits which has hitherto prevailed among the youth of our country, and which has necessarily thrown its most important interests into the hands of those who, by feeling and habit, are led into commercial connections elsewhere. This convention cannot, therefore, too earnestly recommend the speedy adoption, by all of their fellow citizens, of measures to *introduce* COMMERCIAL EDUCATION *among our youth;* to train them up to habits of business and thereby to *establish a body of merchants whose every interest and feeling shall be centered in the country which has reared and sustained them.*"

Malachy Postlethwayt, in his great work, the *Universal Dictionary of Commerce*, maintains that,

"Without an acquaintance in the produce and manufactures of the commercial world, and in the laws of our own and foreign countries, in relation to general trade; without abilities to obtain the best intelligence, in order to strike the critical time when and where exportation or importation from nation to nation, drawing, remitting, and negotiating foreign bills, invite to the best advantage; without knowledge of the duties, imposts, subsidies, drawbacks, bounties, and all other charges and allowances at home and abroad, to which trade is subject; it is impossible that any previous calculation can be made, whether an adventure will turn to account or not. To the ignorant, commerce is but a game of chance, where the odds are against the player. But to the accomplished merchant it is a science where skill can scarce fail of its reward; and while the one is wandering about on a pathless ocean without a compass, and depends on the winds and tides to carry him into port, the other goes steadily forward, in a beaten track, which leads him directly, if no extraordinary accident intervenes, to wealth and honor. Such, indeed, is the strength of natural discernment in some, and such sometimes the uncommon attention to business of others, that they make little difficulty in breaking through every obstacle to knowledge, if they obtain but a glimmering light. The case of the generality is far different."

In an Address before the southern Agriculturists, the Hon. John B. O'Neal, of South Carolina, remarks:

"This, however. demands what we have not in all parts of the State, an *educated class of husbandmen.* The great fault of education in Carolina is *that it has no particular application.* The clergyman, the lawyer, the physician, the merchant, the mechanic and the farmer, are all educated alike. With suitable attention on the part of parents and guardians, education might be so directed as to fit a man for his business, instead of making him a prodigy of learning *without one particle of common sense.*"

Dr. Bachman, the collaborator of the celebrated Audubon, adds:

"Agricultural schools first had their origin, I think, in Germany; they were introduced next into France and Switzerland, and are now springing up in every part of Europe. The Rensselaer School in New York is also an agricultural one. The most complete institution of the kind I had an opportunity of examining, is called the Institute of Agriculture and Forrestry, near Stautgard. I observe that it is characterized in the British Farmers' Magazine, as the most complete agricultural school in Europe. Here, in addition to all the studies pursued usually in academies, all the operations of agriculture and horticulture are performed by the students in the open air, under the supervision of teachers qualified to undertake, note down and record, every observable fact and traceable cause. Here are delivered regular courses of lectures in geology, mineralogy and chemistry—on soils, water, moistures, vapor, fermentation, gasses, mutual attraction, condensation and results. Instructions are given and elucidated by experiments on light, heat, electricity, galvanism, magnetism, etc. These are all employed by nature and are in incessant operation. They constitute the class of great natural agents. Botany, in the most extensive sense of the term, forms a very important feature, which extends to the physiology of plants, their uses, medical and other virtues. Entomology is also taught as a science connected with agriculture, and the habits of insects as well as birds and quadrupeds, are studied in order to guard against their depredations or to benefit by their labors."

TEXT BOOKS

Will not be numerous or expensive, and can be had in New Orleans. Authorities consulted and referred to in the course of Instructions and Lectures in the different departments.

Œconomics.—Stewart's Inquiries in Political Economy; Lauderdale on Public Wealth; Smith's Wealth of Nations; Ricardo's Political Economy and Taxation; Malthus's Works on do.; Torens on the Production of Wealth; M'Culloch's Works; Dr. Cooper's Treatise on Political Economy; Cardoza's do.; Whatley's do.; Chalmer's do.; Scrope's do.; Seniors' do.; Carey's Principles of Political Economy; Quincy's Logic of do.; Hume's Essays; West on Land and Capital; Ricardo's Dialogues; Bailey on Values; Jones on Wealth and Taxation; Boileau's Introduction to Political Economy; Young's Political Arithmetic, Foreign Works of Isnard, De Tracy, Say, Garnier, Ganilh, Douffroy, Sismondi, Droz, Blanqui, Rau, Chevalier, Rossi, Nerri, Becarria, Gioja, Pecchio, Munoz, Ward, Ortiz, Guarina's Estrado, Dictionaire d'Economie, Scrittori Classici Italiani, di Economia Politica, etc.; Mills's Political Economy, 2 vols., 1849.

Commerce.—Robertson's Mappe of Commerce; Roberts's Treasure of Trafficke; England's Treasure by Foreign Trade, by Thos. Mun; Fortrey's England's Interest and Improvement; Coke's Treatises on Trade, etc.; England's Great Happiness; Britannia Languens; Childs's Discourse of Trade; Dudley North's Discourses on Trade; Davenant on the Balance of Trade; King's British Merchant; Woods's Survey of Trade; Defoe's Plan of English Commerce; Gee's Trade and Navigation of Great Britain; Carey's Discourse on Trade, etc.; Dobbs on Trade of Ireland; Decker on the Decline of Trade; Tucker on the Trade of France and England; Tucker on Commerce and Taxes; Tucker on Trade of Turkey; Bell's Vindication of Commerce and the Arts; Postlethwayt's Dictionary of Trade and Commerce; Postlethwayt's Commercial Interest of Britain; Cantillon s Analysis of Trade; Rolt's Dictionary of Trade; Mortimer's Dictionary of Trade and Commerce; Mortimer's Elements of Commerce; Tucker's Tracts on the same subject; Sheffield on American Commerce; Sheffield on Irish Commerce; Oddy's European Commerce; Mill's Defense of Commerce; M'Culloch on its Principles and History; Pitkins's Commerce of the United States; Hagemeister on Russian Commerce; McGregor's Commercial Statistics; Melon's Essay on Commerce; Savary's Dictionary of Commerce; Condillac, du Commerce et Le Gouvernement; Ricardo's Traite du Commerce; Arnauld's Balance du Commerce; Sismondi, Laboulinierre, etc., on Commerce; Douglass's North American Settlements; Bacon's Colonization of the Free States of Antiquity; Moseley's Treatise of Sugar; Brougham's Colonial Policy; Edwards's West Indies; Bliss Colonial Intercourse; Bliss on the Timber Trade; Martin's Statistics of British Colonies; Merivale's Lectures on Colonization and Colonies; Mun on the India Trade; Robertson on Ancient Communication with India, and Modern Trade with it; McPherson's European Commerce with India; Milburn's Oriental Commerce; Chitty on the Laws of Commerce, Manufactures, etc.; Hooper on Ancient Measures; Reynardson on English Weights and Measures; Arthbutnott's Coins, Weights and Measures; John Quincy Adams's Report on Weights and Measures; Gordon's Universal Accountant and Complete Merchant; King's British Merchant; Hertslet's Treaties of England; Evelyn's Navigation and Commerce; Anderson on Commerce; Macpherson's Annals of Commerce; Vincent's Commerce of the Ancients; Stephen's Progress of Discovery, Navigation and Commerce; Cooley's Maritime and Inland Discovery; Heeren's Commercial Researches; Huat's History of Commerce; Depping's Histoire du Commerce; MMartin's Commercio d'Veneziani; Petty on Money; Locke's Treatises on Money; Sir Isaac Newton on Coinage; Leake's History of English Money; Harris on Money and Coins; Snelling's Works on Coinage; Merrey on the Coinage of England; Thornton on Paper Credit; Foster's Commercial Exchanges; Liverpool on Coinage; Blake on the Course of Exchange; Rudong's Annals of British Coinage; Gilbert's History of Banking; Gallatin on Currency and Banking in the United States; Gouge's Treatise on do.; Carey's Credit System; Tucker's Theory of Money and Banks; Tooke's History of Prices.

Agriculture, Manufactures, Internal Improvements, Statistics, etc.—M'Adam's Observations on Roads; Parnell on Roads; Phillips's Inland Navigation; Woods's Treatise on Railroads; Petty's Essays on Political Arithmetic; Works of Arthur Young; Dickson's Husbandry of the Ancients; Chalmer's Comparative Strength of Great Britain; Colquhoun on British Empire; Loudon's Encyclopædia of Agriculture; Parnell's Applied Chemistry; Knapp's Chemical Technology; Weisbach's Mechanics of Machinery and Engineering; Liebig's Agricultural Chemistry; Johnson's Agricultural Chemistry; McCulloch's Statistical Account of British Empire; Porter's Progress of the Nation; Porter's Tables of Revenue, Population, etc.; Tucker's Progress of the United States in Population and Wealth; Holland's History of Coal and the Coal Trade; Fraser's Fisheries of Great Britain; Elking's Greenland Trade and Fisheries; Scoresbey's Arctic Regions; Murray's Polar Seas; Babbage's Machinery and Manufactures; Schrivenor on the Iron Trade; Ure's Dictionary of Arts, Manufactures and Mines; Bischoff on Woolen and Woolen Factories; Slater's American Manufactures; Morgan's Treatise on Life Insurance; Edmond's Tables on do.; Morgan's Essays on Probabilities Applied to Life Insurance; Bentham's Defense of Usury; Betero's Cause of the Greatness of Cities; Benjamin Franklin on the Increase of Men; Hume on Populousness of States; Short on Decrease of Mankind; Price, Wales and Malthus, on English Population; Summer's Treatise on the Records of the Creation; Saddler's Law of Population; Allison's Principles of Population; Hawkin's Elements of Medical Statistics; Thackrah on the Effects of Arts, Trades and Professions, on Health and Longevity; Eden's History of the Laboring Classes and State of the Poor; Walker on Pauperism; Carey on Wages; Farland's Inquiries Concerning the Poor; Pratts's History of Savings Banks; Prostitution dans la ville de Paris, par M. Parent Duchatelet; Dalrymple on Feudal Property; Maugham on Literary Property; Godson on Copy and Patent Rights; Blair's Slavery Among the Romans; Blandinel on the Slave Trade; Phillips on the National Debts; Saxby on the British Customs; Sinclair on the Revenue of the British Empire; Dr. Hamilton on the National Debt; McCulloch on Taxation; Dr. Davenant's Political and Commercial Works; Beckman's History of Inventions and Discoveries; Jacobs on the Precious Metals; Public Economy of Athens, by Boeckh; Vaughan's Age of Great Cities.

THE

COMMERCIAL REVIEW.

Vol. VII, Old Series. **NOVEMBER, 1849.** **Vol. I, No. V, N. S.**

ART. I.—NEGRO SLAVERY AT THE SOUTH.*

COMPARISON OF SLAVE LABOR AND THE PAUPER LABOR OF EUROPE; ABOLITION OUTRAGES AND FALSEHOODS; THE RESULTS OF EMANCIPATION AND THE HAYTIAN REPUBLIC, ETC.

[As we said in September last, this paper is the production of a northern gentleman who has traveled extensively in the southern States. The style is simple, unaffected and loose, but the paper will have interest with our readers notwithstanding any faults.—Ed.]

It is not this mutual love and good will and spirit of mutual protection, binding southern masters and slaves together, that keep English *freemen* in submission to a system inconceivably worse than any system of negro slavery in the United States. It is want, absolute want, and perfect inability to escape from it. That there is no love for employers, is proved by the hostility of operatives against them which requires a constant force of police and armed soldiers to ride down the mob whenever they meet to discuss their grievances—by the necessity of the locking, bolting, barring and guarding, every night brings to the property holders in all English manufacturing towns, to guard their lives and property from the vengeance of the starving millions of England's slavery-denouncing, free born, poverty-inheriting laborers.

What a miserable state of insecurity and fear, so different from the prevailing practice in slave-ridden Mississippi, where I know, from personal observation, that, instead of the southern people reposing, as I have often heard asserted by visionary abolitionists that they do, upon a magazine of gun powder, the explosion of which they were in constant fear and dread of, masters and their families, and overseers, those cruel negro-whipping tyrants, lay down at night with feelings of the most quiet and perfect security—their persons and property unguarded by bolt or bar, policeman or soldier, and not one in a hundred ever thinks of sleeping with gun or pistol in the room: and if he did, what would be the use where doors and windows are all open, and all the slaves upon the plantation as free and unconfined as master and overseer, and yet the latter sleep as free from fear as I do in my own house.

I visited a plantation in Mississippi, upon which there are more than one hundred slaves in charge of an overseer, who, with the exception of a young physician boarder, are the only whites on the place; and two of the nearest plantations upon which there are more negroes than upon this, are each in charge of a single overseer, and another by a widow, so that, in that neighborhood, I presume that there are more than fifty able-bodied negroes to each white man. And this overseer, who is noted for his ability to make negroes labor, and undoubtedly uses the lash all that is needed, has so little fear of being blown up in this great bug-bear magazine of powder, that he lives here almost alone among the slaves, and never carried a pistol or kept fire arms in his room in his life.

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* Concluded from September number.

A writer from whom I have quoted largely, speaking of a temporary residence upon the banks of Lake Concordia, in Louisiana, says, what I also know from personal observation, that in this neighborhood, the slaves outnumber the whites nearly an hundred to one. There is no guard or patrol on duty; the slaves are at liberty as soon as the day's work is finished; the door of the cottage I occupy has neither lock nor bolt; my room contains many valuables; yet I never felt safer in my life, for I have known this neighborhood nearly twenty years; always containing near the same number of slaves under the charge of overseers, yet peace, plenty, quiet and comfort, have had an uninterrupted reign—for experience has taught them, that when order and discipline are preserved among this people—when they are kindly treated and made to know and feel that they are servants—that their overseer is not a tyrant, but, for the time, a master whom they must obey—they need no compulsion to make them obey, or go cheerfully to their work without his attendance, for the common practice is to rely upon the most trustworthy slaves themselves, to limit or extend the amount of each day's labor. It is an indisputable fact, that an overseer who urged the slaves beyond their strength, or that inflicted cruel or unnecessary punishment, or failed to see them well fed, or kindly taken care of when sick, would be as sure to lose his place, as though he permitted them to idle and waste their time.

If witnesses are required to prove my assertions, I can call by name an hundred as honorable and high-minded men as ever breathed the air of heaven, who will vouch for every word that I have uttered.

Having feasted upon the diet of English factory operatives, let me introduce you now to the bed and board of negro slaves, in cotton-planting, negro-oppressing Mississippi. Contrary to my practice heretofore, I will call a few witnesses by name—I am sure that they will excuse the liberty, if it should ever come to their ears, for my witnesses are gentlemen in every sense of the word. John T. Leigh, of Yallubusha county, I invoke you first; state, if you please, as you did to me, how you feed your negroes?

"The most of my negroes have families, and live as you see in very comfortable cabins, nearly as good as my own, with good fire places, good floors and doors, comfortable beds, plenty of cooking utensils and dishes, tables and chairs. But I intend, in the course of another year, to build them a new set of cabins, of uniform size, so as to correspond in appearance with the overseer's house. Those who have not families of their own, mess together; I give each of them 3½ lbs. of bacon, clear of bone, per week, and of the same quality that I use myself, and which I make upon the place, and generally about a peck and a half of corn meal, not being particular about the measure of that, as I raise plenty of corn and grind it in my own mill, and wish them to have all they will eat without wasting it. I also give them sweet potatoes and plenty of vegetables in the season of them. Those who choose to do so, can commute a part of the meat rations for an equivalent in molasses. I also give them a liberal supply of fresh meat from time to time during the year.

"They also, as you see, all have their hen houses, and as 'master's corn crib is always open,' they raise an abundance of eggs and fat chickens to eat or exchange for any other luxuries they wish. Besides, my negroes raise a crop of cotton every year for their own use, and several of the most provident of them always have money, often to the amount of fifty to one hundred dollars. You will observe that the children are all taken care of and fed during the day at the nursery, upon corn bread and fat, and hominy and molasses.

"All the cotton clothing and part of the woolen is spun and wove by women kept employed at that business on the plantation. I give my negroes a feast and frolic every Christmas. I was born and bred among slaves in Virginia. In buying and selling, good masters are always careful not to separate families. Two of my men have wives on President Polk's plantation which adjoins mine, and whom they are free to visit every Saturday night and remain with till Monday morning."

Now this is the testimony of a most honorable living witness, whom if you wish to cross-examine, you can do so at any time. If you will visit him, you will find that no father is better loved or more respected by his children, than he is by his slaves; and I should not be surprised if some of you should acknowledge that, in every respect, they lived more comfortable than many of us do.

I will next ask you to call on Capt. Wm. Eggleston, of Holmes county, whom you will find a fine specimen of an old Virginia gentleman, and whose hundred and fifty fine, healthy, hearty looking slaves, will be the best evidence that he feeds them in the same way of the last witness. There I saw the same paternal love and the same respect for "old massa"—the little negroes running after him, as we passed through the village of negro cabins, to shake hands and say "How de do, massa,"—"God bless massa,"—and receive a reply, notwithstanding it comes from a slaveholder, acceptable in the sight of Heaven, of "God bless you, my children."

I will introduce to you one more witness, only because the system of feeding and dealing out rations, differs from the others; it is that of Col. Joseph Dunbar, of Jefferson county, now upward of sixty years of age, a native born Mississippian, who has lived all his life in the vicinity of Natchez, the very hotbed of all that is awful, wicked, bloodthirsty and cruel, in connection with southern slavery; where slaves, if they are starved anywhere, are starved here, or fed upon cotton seed, as I have heard asserted by those who believed it to be a fact.

"Upon the 'home plantation,' Col. Dunbar has one hundred and fifty negroes, fifty of which are field hands. The reason of this is, that he keeps nearly all the aged and children that would naturally belong to another plantation, where he can look every day to their wants, and provide with his own hands for their comfort. His negro quarters look more like a neat, pleasant, New England village, than they do like what we have often been taught to believe was the residence of poor, oppressed and wretched slaves. I did not give them a mere passing view, but examined the interior, and in some of them saw what may be seen in some white people's houses—a great want of neatness and care—but, so far as the master was concerned, all were comfortable, roomy and provided with beds and bedding in abundance. In others there was a show of enviable neatness and luxury; high-post bedsteads, handsomely curtained round with musketo netting, cupboards of blue Liverpool ware, coffee mills, looking-glasses, tables, chairs, trunks and chests of as good clothes as I clothe myself or family with. Every house having the univeral hen-house appendage. In the nursery were more than a dozen cradles, and on the neat, green, grassy village common, were sporting more than forty negro children, neatly clothed, fat and happy looking, lazy little slaves. At a certain signal upon the cook-house bell, the young gang came up in fine order to the yard for their dinner ; this consisted of meat gravy, and small pieces of meat, thickened with broken corn bread and boiled hominy, seasoned with salt and lard, to which is occasionally added molasses. The cooking for all hands is done in one great kitchen or cook-house, by an experienced cook, and must be well done, as I have no doubt that the cook would be punished severer for any careless or willful neglect about his business, than would any other hand for neglect of work in the field ; and I judge this from the fact, that I accidentally overheard the Col., while examining some bread that was not well baked, ask the cook 'if he sent such bread as that to the field, because if he did, and he should repeat the offense, he would order the overseer to give him a dozen lashes—for, mind I tell you, boy, that my negroes shall have good bread and plenty of it.' On being assured by the cook that that was the only loaf not well baked, and that there was plenty without it, he appeared well satisfied. I afterward examined the other bread and tasted it, and found it better than that which I have found upon many a master's own table. The bacon, too, was excellent and well cooked, and given at the rate of 3½ lbs. per week to each hand. Fresh meat and vegetables are also given here in plenty. The breakfast and dinner is generally put up in tin pails for each family or mess, or for single hands, as they prefer, and sent to the field, which they will sit and eat in the hot sun, in preference to going into the shade. The supper they take in their own houses, to which they often add luxuries from the hen-houses, or such as they purchase with the sale of eggs and chickens, which they frequently do to their own masters. In the yard of the overseer's house is a large, airy building, neatly whitewashed, which is used when needed, for a hospital ; and upon Christmas and other holidays and wedding festivals, as a ball-room. I witnessed here again that same kind of deep-seated love for 'old massa,' from the children and several old negroes who were full grown when he was born, and had lived to see 'young massa' grow up in prosperity to provide for them in decrepid old age. The gleam of joyous satisfaction, too, that beamed from the eyes of two or three sick women, when 'good old massa' called to see sick old Kitty, was enough to warm his Christian heart to thank God that he was placed in a situation where he could give so much happiness to his fellow creatures."

If the most cold blooded abolitionist that ever sought to sever bands like these, can witness such scenes as this and an hundred others that I have seen, and not feel and acknowledge that he has had an erroneous idea of southern slavery, then will I acknowledge that God makes men with most unaccountable dispositions. It does appear to me most unaccountable, how any man, in his sober senses, with a full knowledge of facts as they do actually exist, can wish to dissolve the bonds between master and slave, on account of, and under the plea of, doing good to the slave. If he will say that he wishes it solely on account of "ameliorating the condition of the" whites, and that he conceives it necessary to sacrifice the happiness of the slaves to effect this object, then will I acknowledge that he has some show of reason and common sense on his side. But to set them free among the whites, he will make them just as much more worthless and miserable than they now are—not only as the free negroes are now more worthless and miserable than the slaves, but in just that proportion more so that the number of free negroes would be increased. To free them and send them off to live by themselves, will be to send them away from home, friends, civilization, comfort, Christianity and happiness.

If any would inquire whether in my advocacy of letting what are termed "southern institutions" remaining quietly as they are, until the people themselves wish to change them, I also take into account all the cases in which the slave may be abused, or whether in my comparisons between English operatives and southern slaves, I take into account all the floggings of the latter, I answer most decidedly, yes, I do; for, in all my tour, during the past winter, I did not see or hear of but two cases of flogging: one of which was for stealing, and the other for running away from as good a master as ever a servant need to have, which is proved by the appearance and general good conduct of his negroes, and that they are well fed I know from many days personal observation; and I have seen some of them with better broad cloth suits on than I often wear myself; and more spare money than their master, as he will freely acknowledge. This witness is Dr. M. W. Phillips, of Hinds county, who will readily disprove this statement if not true.

If I am asked the question, I have no hesitation in saying, as did Admiral Rowley to a committee of the British Parliament, "that if I had been born to labor, absolutely to labor, I would sooner have been a black, in the island of Jamaica, than a white man in Great Britain, and, taking my chance for the same degree of talent and industry, I should have been able, at an earlier period of life, to become my own master." And I do not limit my comparison to the factory operatives, but to the state and condition of the daily laborers in England, Ireland and Europe generally, not forgetting to add a few millions upon this continent.

And if the question should be asked how a slave can make money for himself, so as to be able not only to supply his own little wants, but actually to lend, as some of them do, money to their own masters, I will answer—by raising poultry, making baskets and brooms, gathering moss, doing overwork Saturdays and evenings, for which they are paid, and by cultivating a crop for themselves, land for which is allotted them on almost every plantation. And, although they are often too indolent to cultivate their own crops in their own time, a good overseer will always see that they do not neglect their own interest, any more than their master's. According to my observation, there are but few overseers to be found, who, like those of the factories of England, are vile extortioners of labor, often ducking children in tubs of cold water kept for the purpose, or deducting the wages of adult laborers for a moment's idleness, or delay of five minutes behind time. On the contrary, I have ever found them to be very quiet personages, and often well bred gentlemen, who would do honor to any society; seldom being personally present with the slaves on large plantations, only visiting them occasionly while at their labor, to give directions about the kind of work to be done, and to see that they do it according to orders: and in their necessary intercourse with them, affable, gentle, firm in their demeanor, without familiarity—for that no negro can bear—governing without passion, by fixed rules—seldom punishing them, except when absolutely necessary to preserve order and discipline, or prevent crimes, and never to compel them to do more work, unless they willfully neglect their duty. All of them know what their duty is upon a plantation, and that they are generally willing to do, and nothing more; and if more than that very moderate and easy duty be required, they will not submit to it, but become turbulent and impatient of control, and all the whips in Christendom cannot drive them to perform more than they think they ought to do, or have been in the long habit of doing.

If I should be asked the question, whether in all my journeying in Mississippi, I did not meet with any of those instances of the vile manner in which blacks are fed there, as is sometimes told us by rascally runaway negroes and their aiders and abettors, I should answer, only once, and that was in this manner—spending a few days with a gentleman in Washington, near Natchez, who was himself from that island where the experiment is so often tried, how great an amount of human life can be sustained upon the smallest amount of the cheapest food, and where it is considered economy to have everything eaten that is possibly eatable; I suppose he was practicing in Mississippi upon the same principle; for I observed, one morning, a negro engaged over a large kettle of boiling cotton seed and corn, cabbage stumps and turnips, cutting up and putting into the kettle a litter of pigs that had been overlaid by the mother and killed the night before; on inquiring what he was making soup for, he very honestly told me it was to feed them *young blacks*, that I had just been looking at. Whether he would have dared to aver the truth, if his master had been present, is not for me to say; or whether cotton seed soup, thickened with dead pigs, is a wholesome diet, that would be relished by young negroes, I am unable to say; as the young blacks for whom this unsavory dish was destined, did not speak our language, or I should certainly have asked them the question; but, unfortunately for me and the abolition cause generally, these *blacks* belonged to the Berkshire family, and only answered me with a *grunt*.

But I do seriously say, that I did not see or hear of one place where the negroes were not well fed; and I did not see a ragged gang of negroes in the South; and I could only hear of one plantation where the negroes were overworked or unjustly flogged, and on that plantation the master was a drunken, abusive wretch, as heartily despised by his neighbors as he was hated by his negroes, and were it not for the consequences to themselves if they should rise upon and pull him limb from limb, his brother planters would rejoice that he had met the fate that cruelty to slaves, they are free to say, justly merits.

The two things that are most despised and hated in the South, are masters that abuse and starve and ill-treat their slaves, and abolitionists, who seize upon every isolated case of the kind, and trumpet it through the land as evidence of the manner that all slaves are treated, and then call upon the people of the free states to aid the negroes to free themselves from such inhuman bondage, peaceably if they can, forcibly if they must, no matter whose or how much blood shall flow.

Is it any wonder that abolitionists should be hated, despised, dreaded, feared in the South, when they see such doctrine as I am about to read from the Emancipator, showing how they intend to abolish slavery. Speaking of politics and the prospect of the abolition party getting into power, the Emancipator, the leading "Liberty Party" journal says:

"Let them (the Whigs and Democrats) distinctly understand, that our use of the *ballot box* leads to a use of the *cartridge box*. We are opposed to international war, and believe that a Christian nation would never need to fight offensively and defensively. But we are in favor of the execution of law, and the establishment of justice at all hazards. So that, if it were possible for slavery to exist in this Union after the opponents of the system had assumed the reins of government, *we should be in favor of using the physical power of the nation to put it out of existence. It is nonsense, it is knavery, it is suicide to talk any longer* *of the General Government not having power to abolish slavery in the whole country,* when the slaveocracy is giving it power to annex to us all the slavery of Texas and Cuba and Brazil. It has that power, or it is not for one moment fit to live. It has that power, or else to establish justice and secure the domestic tranquility is a thing which it is utterly incapable of doing."

" Fortunately, this avowal comes at a sufficiently early day to operate as a warning to the true friends of freedom, not to confer power upon a party which stands ready to trample the constitution under its feet, and involve the country in a civil war."

Is it any wonder that a people naturally of a quick and fiery temperament, should show some little excitement at such wholesale slander upon such good men and devout Christians as thousands of the slave holders of the South most truly are, and daily show themselves to be, in all things except this one damning sin of owning slaves, as it is to be found in the following extracts, which have been published in the "Indiana Freeman," a little echo of loud English abolitionism, that is seeking through all the willing tools who wickedly wish to dissolve this Union, to effect the object by promoting discord, hatred, jealousy and heartburnings between the members of our political family, under the hypocritical plea of releasing the poor oppressed negroes from slavery.

I am truly sorry that such a paper, which a southern editor fitly calls a filthy sheet, exists in Indiana, under the name of Freeman. Now that these pretended extracts from southern runaway-slave advertisements, ever existed, except in the brain of some mischief maker, I will not believe until I see the originals; for I have seen, for a number of years past, a stereotype edition of these "extracts," going the round of the abolition papers: but in all my reading of southern papers, I never have seen anything like one of these pretended advertisements, nor in my anxious inquiry after truth have I ever seen any evidence of this cutting and maiming, knocking out teeth and branding; and it is just as easy for me to believe that any sane man would knock out the front teeth of a horse to mark him, as he would knock out those of a slave, worth perhaps five or six hundred dollars, and by which operation he would probably injure the value of his property twenty-five per cent. But here are the extracts:

" *Slavery.*—Under the slave system of the United States, the master may brand his slaves with hot iron, maim them, or maltreat them in any manner whatever, and in pursuing runaways may shoot them. As evidence that this is often done, we make extracts from advertisements in southern papers. Similar advertisements may be found in southern papers at any time.

" 'Ranaway, a negro woman and two children; a few days before she went off, *I burnt her with a hot iron,* on the left side of her face; I tried to make the letter M.'

" 'Ranaway, a negro girl, called Mary; has a small scar over her eye, a good many teeth missing, the letter A. is *branded on* her cheek and forehead.'

" 'Was committed to jail, a negro man; says his name is Josiah; his back very much scarred by the whip, and *branded on the thigh and hips, in three or four places,* thus (J. M.), the rim of his right ear has been bit or cut off.'

" 'Fifty dollars reward, for my fellow Edward; he has a scar on the corner of his mouth, two cuts on and under his arm, and the letter E. on his arm.'

" 'Fifty dollars reward, for the negro Jim Blake; has a *piece cut out of each ear,* and the middle finger of the left hand cut off to the second joint.' "

"These are only a few of the pretended advertisements the editor gives, which he says are so common in southern papers. After giving a string of nearly a column, he thus proceeds:"

"A favorite method of marking slaves, so that they may be recognized, is by knocking out their front teeth. But this form of cruelty is mild in comparison with others frequently resorted to."

"And then continues a series of lies as black as were ever fabricated, about the most unheard of cruelties—burning slaves alive—cutting them to pieces with knives, by inches—swinging them feet upward, and whipping them to death, &c., which are stated to be common occurrences at the South, though it is graciously acknowledged that *all* slaves are not treated precisely so bad.

"Our readers may judge from such things as these the sort of misrepresentations used by these fanatical scoundrels, to prejudice the people of the free States against the South."

Now, by way of offset to these, allow me to read the following extract from a letter of Mr. Brooks, editor of the New York Express, to show that even in slavery-hating, abolition-loving Massachusetts, slaves, yea, negro slaves, were not only held, but bought and sold, "like beasts in the market." But as they did not knock out their front teeth, I suppose it was no sin. The extract is headed

"OLD BOSTON ADVERTISEMENTS.

"July 8, 1771—To be sold, a hearty, likely negro boy, about twenty years of age; has had the small pox; can do any sort of work; would make an excellent servant in the country."

"April 19, 1731—To be sold by public vendue, on Wednesday next, at the Heart and Crown, in Cornhill, Boston, sundry sorts of household goods, beds, pots and kettles, brass and iron ware, and a *young negro woman,* seasoned to the country."—*N. E. Weekly Journal.*

"July 5, 1742—To be sold, a young, likely, strong and healthy negro woman, that is an excellent cook, and can do all sorts of business."—*Boston Evening Post.*

"July 5 1742—Any person that has one or more negro men to dispose of, will hear of a customer by inquiring of the printer."

"Sept. 20, 1742—To be sold (among a boat's furniture), a likely negro man, aged twenty-eight, who has followed the sail-making trade eight years."—*Boston Evening Post.*

"Feb. 18, 1771—To be sold at auction, a sprightly negro lad, eighteen years old, that can speak French. Inquire of the printers."—*Mass. Gaz. and Post Boy and Advertiser.*

"Dec. 17, 1744—To be sold, a negro woman, about thirty-six years of age. She has been in Boston from a child. She is a good cook, and washer, and can do all sorts of household business in a complete manner, and is a very serviceable negro."—*Boston Evening Post.*

Here is an advertisement of a different character:

"Dec, 17, 1774—A fine negro child, of a very good breed to be given away. Inquire of the printer."—*Boston Evening Post.*

"Oct. 26, 1730—To be sold by David Pippoon, fine young negro girls and boys."

"Also, a white young man, who is willing to serve twelve months for five pound and prison charges."

Enough for once. I could send you more if more were necessary to show that the present customs of the South were once the customs of New England."

Is it any wonder that the citizens of the South should feel themselves aggrieved, slandered and ill-treated, and under the excitement should make use of harsh language toward the northern States? Is it any wonder that the people of the South object to any interference by the people of the northern States, or those of other nations, with what they conceive to be their constitutional rights?

The editor of the Kentucky Commonwealth says:

"Whether slavery be a blessing to us and the slaves—*and we regard it as an unmitigated curse in every aspect*—is not a question proper to be submitted by our government to the consideration of foreign governments. We deny even to the governments of the Co-States of this Union, any right, power or propriety, in interfering with the question. We hold that our security and our ultimate rights depend upon maintaining the question as one *wholly domestic to the States in which the institution of slavery exists.*"

This is precisely the ground that I think all true friends to the Union should take upon this agitating question. If abolitionists really wish to see slavery abolished, instead of seeing the Union dissolved, they will pause in their mistaken, mad career, and see if there is not a more certain way of bringing about that object, in a patriotic, christian manner, than heaping abuse upon those who were born to the inheritance. As an evidence that some of the people of slaveholding States do not esteem the inheritance as a blessing, I will give another extract from the same paper. Speaking of Mr. Calhoun's letter to our Minister in France, the editor remarks upon the institution of slavery, thus:

"As to the blessings of slavery, Mr. Calhoun is very silly to argue that question even at home; still more abroad. The universal sentiment of the North, and, we believe, *a majority of the people even in the slaveholding States, regard slavery here as a plague-spot and a curse.* In Kentucky, while we believe all her citizens are loyal to the constitution, and would resist any interference in the question, nearly all regard the institution as every way injurious to us and would joyfully adopt any just and practicable scheme of relieving themselves of the evil. The number of slaveholders in Kentucky is about one-fourth the number of voters. This is an important fact, which the considerate should constantly keep in mind. Mr. Calhoun's principles carried out, would make the laboring freemen of this country slaves to slavery.

"God forbid we should excite the smallest prejudice against either negro labor or those who enjoy it. We would make no discrimination between them and others; for we hold ourselves conscientiously bound, under the compromises of the constitution, to regard all and protect all alike."

This is the true and honest language of the Christian abolitionist—I know the man—I know he hates slavery, but loves his country. A large majority of the slaveholders are men of proud spirit, but true hearts and stout arms and disposition to resist foreign dictation. They are to be conciliated, not despised and their rights trampled on and made subservient to the will of men who would illegally wrest their legal possessions from them. That Kentucky would this day have been ripe for emancipation, I have no doubt, if she had been conciliated instead of cursed by the abolitionists of the North.

Here is more language of a Kentucky abolitionist. It is from the pen of Cassius M. Clay. Compare it with that of the Emancipator, and tell me which is most likely to affect the abolition of slavery. Mr. Clay says:

"Slavery is a municipal institution. It exists by no other right and tenure than the constitution of Kentucky.

"I am opposed to depriving slaveholders of their slaves by any other than constitutional and legal means. Of course, then, I have no sympathy for those who would liberate the slaves of Kentucky in other ways. I have no connection with any man, or set of men, who would sanction or undertake the illegal liberation of slaves; and I feel bound, by my allegiance to the State of Kentucky, to resist (by force, if necessary) all such efforts.

"Whilst I hold that the United States constitution has no power to establish slavery in the District of Columbia, or in the Territories, or in any place of its exclusive supremacy; so I contend, that in the States, once admitted into the Union, and thereby become *sovereign* and *independent*, Congress has no power or right to interfere with or touch slavery, without the legitimate consent of the States.

"I am the avowed and uncompromising enemy of slavery, and shall never cease to use all constitutional and honorable and just means, to cause its extinction in Kentucky, and its reduction to its constitutional limits in the United States.

"Born a Kentuckian and a slaveholder, I have no prejudices nor enmities to gratify; but, impelled by a sense of self-respect, love and justice, and the *highest expediency*, I shall ever maintain that *liberty* is our only safety.

"Then let us, having no regard to the clamors of the ultras of the North or the South, move on unshaken in our purpose, to the glorious end. Shall sensible men be for ever deluded by the silly cry of 'abolitionists?'—is this not becoming not only ridiculous, but contemptible? Can you not see that many base demagogues have been crying out wolf, whilst they were playing the traitors to their party and the country for personal elevation? Is it not time that some sense of returning justice should revive in your bosoms, and that you should cease to denounce those who in defeat do not forget their integrity, and who, though fallen, do not despair of the Republic?"

Another Kentucky writer says, that the free blacks of Kentucky are such a set of miserable, degraded, thievish beings, that he believes the people of Kentucky never will consent to the manumission of slaves unless they are sent out of the country. He also says of the abolitionists: "*They should let us alone.* They do n't know how to fight this battle, and I fear they do n't care whom they strike in their blind thrusts. On the other hand, the advocates of perpetual slavery, are full of unnecessary fear, as all the efforts of the abolitionists are in their favor."

As I have heretofore premised, that however beneficial and advantageous the system of slavery was to the slaves themselves, it was a curse to the whites; I wish to call a few witnesses upon this point. First, however, I wish to give a few statistical facts.

It may probably be estimated that there are now on the continent and islands of America, near ten millions of the descendants of the African race, including those of mixed blood in which the negro predominates, viz:

In the United States,	3,500,000
British Colonies,	900,000
Hayti,	700,000
Spanish, French, &c., West Indies,	1,200,000
The free States of South America, which were formerly Spanish Colonies,	1,000,000

Making 9,800,000; of whom between 5 and 6,000,000 are now in a state of slavery.

The ultimate destiny of this mass of human beings, is a matter of deep concern to the civilized world.

Hayti is the only region where they have attempted self-government, and the evident retrograde movement of that community from civilization toward their native state of barbarism, is such as to hold out no hope to the philanthropist, who would desire to see this vast number of the colored race living in a state of independence, civilization and happiness, unconnected with the whites.

This shows an alarming and rapid increase of slaves in the United States since the formation of the Union. And at the same ratio of increase for the next fifty years, which we have witnessed for the past fifty, will give to the country a slave population of 9,000,000, which will be an increase of over 8,000,000 in a century. With these facts and figures before them, it does not surprise me that southern statesmen should be so anxious to obtain an outlet for the surplus into Texas. Even now, it is evident that slave labor is unprofitable in most of the States of the Union, because of the quantity of the products of the planting States annually produced beyond the demand for them. Hence the call for conventions of planters, to agree to prohibit by force the production of an over-supply of cotton, as by the present prices they cannot live—that is in the style of luxury to which they have long been accustomed. All are sensible of the over-supply of cotton; but who ever thinks of the over supply of negroes. Many planters in Mississippi assured me that they did not make five per cent. upon their capital, and I assure you that their land is deteriorating in value more than five per cent. per annum.

ART II.—THE SUGAR CANE.

U. S. MINT, PHILADELPHIA, *August* 13, 1849.

MY DEAR SIR—Inclosed I send you a translation of M. Payen's recent memoir on the sugar cane, made by my friend and assistant, Prof. J. B. Reynolds. M. Payen's microscopical examinations are in themselves interesting: they are important chiefly because they confirm, by an independent method (ocular observation), the composition of the cane established by the chemical labors of others. It may now, I think, be asserted with confidence, that the chemistry of the mature cane and its juice is sufficiently understood for all industrial purposes. Much, however, remains to be done before the changes, both chemical and anatomical, which take place during the development of that plant, under all the varying circumstances of climate, soil, culture, &c., can be determined; and it is only by aid of such knowledge that rational and truly scientific methods of cultivation, manuring, &c., can be attained. M. Payen's memoir is valuable, because it is one of the first in which the physiology of the cane is accurately described, in connection with the chemical nature of its organs and secretions. Of the high reputation of its author, it is unnecessary for me to speak; his knowledge, however, of the sugar industry is intimate and practical, and his name is identified with some of the most valuable improvements which it has received, particularly with that of using bone black for decoloration, &c.

I am, very respectfully, your obt. servant,

PROF. J. D. B. DE BOW. R. S. M'CULLOH.

THE SUGAR CANE.

EXTRACT FROM A MEMOIR ON THE STRUCTURE AND COMPOSITION OF THE SUGAR CANE. BY M. PAYEN: TRANSLATED BY PROF. J. B. REYNOLDS, FROM THE COMPTES RENDUS, TOME XXVIII, MAY 21st, 1849.

IN instituting some experimental researches on the sugar cane, I have proposed to determine, by aid of the microscope, and chemical analysis,

1st. The forms and the composition of the tissues of this plant;

2d. The seat of the secretion of the sugar;

3d. The changes which age brings about in the forms and nature of the different parts of the tissue;

4th. The variations which the proximate principles experience at the same time.

Under this last head, I have been especially occupied with the parts of the stalk which are used in the sugar industry.

The solution of these questions at which I have arrived, will offer some interest, notwithstanding the important labors of which the sugar cane has been the object, on the part of Proust, Derosne, and MM. Plagne, Avequin, Péligot, Dupuy, Hervy, and Casaseca.

If we examine from the surface to the center a section of the stalk, cut perpendicularly to its axis, at the epoch of its maturity, when it has become yellowish, and the leaves have fallen, we remark:

First. A superficial stratum adhering to the epidermis, formed of a kind of wax (*cérosie*) observed by MM. Plagne and Avequin, and studied by M. Dumas.*

Second. The cuticle, with the angular projections corresponding to the knots between the cells.

Third. The thick walls of the epidermic cells: lines of demarkation exist between the external walls of these cells, and their cavities are in free communication, either through a thin membrane or by numerous small canals (*canalicules*) in the thickness of the walls.

Fourth. The cellular tissue, with thinner walls under the epidermis.

Fifth. A cellular tissue with thick walls traversed by small canals.

Sixth. Two circular concentric rows of woody bundles, each surrounding a space filled by various vessels described further on.

These bundles are almost in contact with each other in the first row, and a little less approximated in the second.

Similar bundles are remarked, but gradually less abundant in woody fibres, and more and more separated from each other, up to the axis of the stalk.

None of these tissues which we have just described contain sugar, while they contain, in greater or less proportion, other substances indicated at the end of this memoir.

I have determined the seat of the crystallizable sugar by observing, under the microscope, thin sections of the different tissues of the dry cane. I took the pains to separate previously the detatched particles, by agitating the sections in anhydrous alcohol. This liquid not dissolving the crystallized sugar, we facilitate the observation by introducing it between the *porte objet* and the plate which covers the sections. By the aid of these dispositions, we may discern crystals of sugar more or less voluminous, and appearing similar to those of rock candy, in all the cylindrical cells with thin walls which surround the numerous bundles of woody fibres and vessels, from the axis to the second row of fibres the most woody.†

We remark, that all these cells communicate with each other in the surfaces in contact, by a great number of small openings traversing the double thickness of their lateral walls, which openings are not found in the bottoms representing the two bases of the hollow cylinder or prism which each cell forms.

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* According to M. Avequin, each developed stalk of sugar cane contains, on an average, two grammes of cerosie.

† The specimens which were used in this experiment, were prepared in 1843 in the colonies, by M. Derosne, who dried rapidly in the sun canes cut previously into slices, about one centimetre in thickness.

In ripe canes, all the tissues which we have just indicated, submitted to a washing with pure water and put in contact with iodine, become yellow; sulphuric acid maintains and renders more intense this coloration, disaggregating the cellulose.

But if we remove, by the aid of a solution of one part of caustic soda in ten parts of water, a part of the azotized matter which impregnates the small vessels with thin walls, as well as a portion of the azotized and woody substances with which the sacchariferous cells are injected, we remark then, under the influence of the double reaction (of iodine and acid), several curious phenomena: the small pointed vessels, commencing to disaggregate, present a slight indigo-blue coloration.

The internal part of the sugar cells, the last formed, swelling very rapidly, passes to the state of the particles of cellulose disaggregated to the extent they are found to be in solution of starch. We comprehend, then, how these parts are tinged an intense indigo-blue. The azotized particles which were adhering to this inner layer separate from it, and manifest their presence by the peculiar orange color of the light granular outline which they form parallel to the contour of the inner swollen walls.

The external membranes earlier formed, more strongly aggregated, and more injected, resist this peculiar disaggregation; they swell, however, form wavy folds, and separate in various points from the neighboring adhering cells, preserving the orange-yellow color acquired under the influence of the double chemical reaction.

After washing with pure water, if we add a solution of caustic potassa or soda to a thin slice, we remark that all the parts of the tissue injected with woody substance, are colored yellow, while the small pointed vessels and the cuticle become more translucent and colorless. This difference in the effects of the reagent adds another distinctive character between these small vessels and the rest of the tissue of the cane. It appears to indicate the absence of woody matter in the parts which, under the influence of the caustic alkali, do not take a persistent yellow color.

The color also everywhere disappears, if we follow the alkaline action, at first with a washing in pure water, and then add acetic acid in excess. This acid clears very notably the *microscopic view.*

If we expose to the action of caustic potassa or soda similar thin slices, and render the effect more marked by the aid of concentration to dryness, we observe after a complete washing that the slices have been completely disaggregated. It is the same with the small pointed vessels, which we do not find again in the space which they occupied. All the other parts of the tissue, in becoming disaggregated under the action of iodine and concentrated sulphuric acid, take an indigo-blue color, which characterizes pure cellulose.

In sugar canes less developed, the partial or complete purification of the cellulose from all the tissues is much more prompt, and does not require as powerful reagents. For if we treat under the microscope some very thin slices of the stalk (between the knots of the middle portion) of a green sugar cane, grown only to a third of its development, first with pure water, secondly with a watery alcoholic solution of iodine, thirdly with concentrated sulphuric acid, we remark that the epidermis and the cellular tissue under the epidermis resist and take an intense orange color; the woody fibres entirely disaggregating, and the large pointed vessels (to the number of two in each one of the vascular bundles) assume and retain an orange-yellow color; the small pointed vessels appear colored a greenish blue, and disaggregate promptly. Finally the sugar cells pass from a yellowish shade to a green, then to an indigo-violet, swelling and breaking up gradually.

I have submitted to the same reagents the lower whitish part (completely enveloped by the sheathing—*engaînantes*—leaves) of a stalk of cane, at an early stage of its growth. In this portion, three centimetres high from one knot to the following one, a section under the microscope showed the fibres destined to become woody, as yet having but little thickness.

An aqueous solution of iodine colored the tissues yellow, with the exception of the small pointed vessels; the addition of a drop of sulphuric acid gave rise, on the whole of the tissues, to one of the most beautiful microscopic appearances; the external hairs, yellowed on their external cuticle and their internal granular membrane, became violet throughout the whole thickness of their swollen walls; the cuticle and the epidermis of the stalk had acquired a deep orange tint, the subjacent cellular tissue was blue throughout all the cells; the same shade colored the small pointed vessels, forming thus a blue cylindrical bundle entirely surrounded with an orange-yellow tissue, to wit: first the large pointed vessels and the fourteen to eighteen tubes adhering to each one of them; secondly the superposed tubes; thirdly the fibres slightly woody. In the middle of the yellow walls of these last, the inner layer of recently formed cellulose was seen, detatching itself in an irregular ring, swollen and blue.

In the younger tissue, above this knot, all the cells present a kind of round or elliptical nucleus of fine azotized tissue, having a diameter equal to nearly a tenth of the diameter of the cell; abundant grains of azotized matter were adhering to all the inner walls. Numerous grains of starch, having about $\frac{5}{1000}$ of a millimetre of diameter. The successive additions of iodine and sulphuric acid tinged the epidermis a deep persistent yellow; all the tubes, vessels and cells, were swollen, assumed a deep violet tint, and separated from each other. Soon the solution became more complete, the blue walls disappeared, exposing to view the isolated brownish yellow epidermis, and all the orange-yellow azotized particles which were adhering to the interior of the destroyed cellular membranes.

The same successive treatments, applied to the thin slices of a lateral shoot, the leaves of which were only developed to thirty centimetres in length, exhibit the epidermis of the leaves and that of the little stalk colored a bright orange-yellow, while all the other elements of the tissues pass rapidly to a violet color, disaggregating themselves.

Finally, in all the stalks and leaves of the shoots recently formed, grains of starch are remarked in great number.

The stalks contain it, especially in the tissues under the epidermis, in the sugar cellular tissues, all around the vascular bundles.

The leaves also present abundant secretions of starch around the vessels of the nerves, in the resisting cellular tissues which envelop these nerves, and extend from one of the faces of the leaf to the other.

These remarkable differences in the nature and distribution of the proximate principles, the much less thickness of the walls of the cells, fibers, &c., and the much less abundant injection of woody matters in the younger tissues, seem to indicate that the differences of the same order would manifest themselves, when the proximate composition of the incompletely developed stalks should be compared with that of the stalks which approach to maturity.

The results of the comparative analyses have effectually exhibited these differences. They help to explain the difficulties, already well proved by the practice of sugar refineries, which the treatment of canes cut before being ripe present.

They show, besides, that it would be useful to separate the suckers, or developed shoots, which remain adhering to the workable stalks, and perhaps even the younger extremities of these stalks, near the terminal part called the arrow (*flèche*), which is always separated.

We see likewise, by casting the eye over the comparative analyses, that the composition of the sugar canes is more complex than was supposed.

PROXIMATE COMPOSITION OF SUGAR CANES.

Ripe Otabeite Cane.		Cane at one-third of its Growth.	
Water,	71.04	Water,	79.70
Sugar, (1)	18.02	Sugar,	9.06
Cellulose and woody matter, (2).	9.56	Cellulose and incrusting woody matter,	7.03
Albumen, and three other azotized matters, (3)	0.55	Albumen and three other azotized substances, (6)	1.17
Cerosie, green matter, yellow coloring substance, matters colorable brown and carmine red, fatty substances, essential oil, aromatic matter, deliquescent matter (4)	0.35	Amidon, cerosie, green matter, yellow coloring substance, matters colorable brown and carmine red,	1.09
Insoluble salts, 0.12; and soluble, 0.16: phosphates of lime and magnesia; (5) alumina, sulphate and oxalate of lime, acetates and malates of lime, potassa and soda; sulphate of potassa, chloride of potassium and sodium,	0.28	Fatty and aromatic matters, hygroscopic substance, essential oil, soluble and insoluble salts, silica, alumina,	1.95
Silica,	1.20		
	100.00		100.00

1. By admitting that glucose and liquid sugar do not pre-exist, we comprehend their habitual presence in small proportions, by reason of the alterations at all the points where the tissues are torn or cut at the moment of the gathering of the canes.

2. The relative quantities of tissue vary according as the *knots* (which contain the closest and most resisting tissue) are more or less approached to each other.

3. This quantity agrees with the elementary analysis, which gave for 2297 milligrammes of dry substance, seven cubic centimetres of azote; T=15°, P=75.54 volumes at 0°=6.47 cubic centimetres; weight=0.02145 of azotized matters in the dried cane, or 0.0055 in the cane in the normal state.

4. Substance which MM. Plagne and Hervy) has the property of transforming, in the juice, the sugar into a viscous and insipid matter, and to oppose alcoholic fermentation; a cold filtration through bone-black eliminates this organic deliquescent substance.

5. The juice of the cane contains some biphosphate of lime, and phosphate of magnesia, for the addition of a slight excess of ammonia gives a crystalline precipitate of the double phosphate of ammonia and magnesia, besides a flocculent

precipitate, which collected and treated by sulphuric acid, gives sulphate and biphosphate of lime. Under the double influence of the air and ammonia, the juice is gradually colored brown.

6. The total weight of these four azotized matters is deduced from the ultimate analysis which gave, for 2240 milligrammes of dried substance, 17.25 cubic centimetres, P=75.25, T plus 13 our 0.009 of azote. by weight=5.85 per cent. of azotized matter in the dry state, equal 1.17 per cent. for the nominal state.

We see that the green cane analyzed contains one-half less sugar, about thirty per cent. less of tissue, and three times as much organic substances and salts, as the ripe cane. Some analogous differences would explain without doubt, by reason of the obstacles which various' organic matters and salts oppose to the crystallization of the sugar, the impossibility of extracting cane sugar economically in countries where, for want of a sufficient temperature, this plant cannot acquire a normal maturity.

The knots of the sugar cane are formed of a close tissue, in which the woody fibres of the thick walls predominate, where all the cells present relatively to their greater thickness, smaller cavities; where likewise the sacchariferous cells are smaller and less numerous. We comprehend, then, how the quantities of sugar which are found in them are reduced nearly one-half, or in the ratio of eighteen to ten hundredths—a result which M. Péligot has proved by the chemical analysis of ripe canes, and the exactness of which I have been able to verify.[*]

We cannot be astonished with another fact, which appears singular at first sight; it is, that the knots contain as much water as the whole of the tissues of the entire stalk. The reason is, that the more considerable proportion of cellulose and incrusting woody substance in certain parts, is compensated by a less proportion of sugar in the other parts of these joints. We cannot, however, give a complete idea of the peculiar composition of the knots of the sugar cane, without adding that the solutions which are extracted from them contain, relatively to the sugar, more foreign matter than is found in the juice extracted from the cane between the knots. It could not be otherwise; since the liquids, contained in the tissues deprived of the peculiar sacchariferous cells, having little or no sugar, contain the greater part of the foreign substances in the sugar, the presence of which is shown by analysis.

In terminating this memoir, I wish to say a word on the economical question of the production of sugar in the colonies.

This question which at the present moment occupies the public attention, seems to me to have received, on the part of science and industry, all the elements of a rational solution; nothing more is required than to apply certain theoretical and practical ideas.

The following are the principal conditions which, in my opinion, it would be indispensable to fulfill. In the first place, and in order to define them in a general manner, I will say that it would be necessary to obtain a means of working which would not be too expensive, and which would assure the best possible recompense to *free* labor.

Which would be arrived at by bringing to the aid of men all the forces which the agricultural, mechanical and chemical sciences of the day offer; especially by the following means:

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[*] The knots become more woody still, whenever they develop laterally at the exterior a shoot or radicle; for we find then, in the corresponding internal parts of the knot, a mass of tissue strongly incrusted with woody matter.

In all that concerns *cultivation*, to collect with care and scatter over the land all the disposable mineral manures of each plantation, the ashes of the begassa, the *cal* of the boilers; and to add to them alkaline or calcareous compounds, of a nature to replace those of which the soil has been deprived.

To utilize all the residues from the manufacture; the molasses and scum, for the nourishment of animals, in order to return to the soil, with the animal excrements, the greater part of the substances which vegetation draws from it.

To apply the different pulverulent residues, arising from the revivification of bone-black, ashes and dried marl and earth, to the absorption, drying and preservation of the animal manures, in order to spread them under less bulk and weight.

To complete the organic nourishment of the plants by means of manures rich in azotized substances: dried blood and flesh, the residues of fisheries, spoiled codfish, &c.

To avoid the employment of manures capable of adding an excess of different salts beyond the proportions useful for the development of the canes.

We shall understand the importance of these improvements which ought to sustain or increase the fertility of the soil, by reflecting that the same lands, according to their state of fertility or exhaustion, have produced annually 7000 kilogrammes of sugar per hectare—a production which has been gradually reduced to 2000 kilogrammes. If it is thought that the labor has become too expensive, in this latter case with the exhausted soil, it would be economical at a double price, on the same land at the time of its greatest fertility

MANUFACTURE.—In the first rank, it is necessary to place the means of extracting a greater quantity of juice, to carry this quantity from fifty to sixty per cent., which is obtained, to seventy-five or eighty, which could be obtained. The use of a second mill, with the injection of vapor or streams of boiling water, would give this result, according to practical experiments made in the colonies by M. Derosne, which we concerted together. In all cases, the most necessary condition of success would be to avoid all delay in the operations, to accelerate even the extraction of the juice, and the elevation of the temperature above the point where fermentation can take place.

We should obtain a very desirable rapidity also in the evaporations, by using the evaporating apparatus perfected in France, and applied with success in the manufactories of beet sugar (especially those of MM. Derosne & Caïl, Pecqueur, Gaspard, Tamisier, Claës, &c). Perhaps it would be well, in order to render the general introduction into the colonies rapid, to carry there, in the first place, the most simple and least costly apparatus.

The rapid extraction of the juice and evaporation are, it is true, subordinate to the resources of fuel in certain localities, which cannot receive importations of coal, and have no other combustible than begassa.

It would be very useful to render general the use of bone-black, and the processes of revivification, in order to obtain purer and more abundant products of crystallized sugar, and to be able to render profitable a greater mass of the useful residues as manures.

The new processes of methodical purification and rapid drainage by centrifugal force; finally, the drying of crystallized sugars, offer a useful complement to the improvements which may be realized in our colonial industry; they will allow an increase of the real value of the products, and a diminution of the cost of packing and transportation; they will avoid, finally, the alterations which fermentations in impure and moist sugars occasion while *in transitu.*

It is evident, likewise, that administrative measures of a nature to encourage the production of the purest sugar, would be useful in reference to the impost, applicable from that time to a greater and more stable value; they would have the effect of hastening the progress of metropolitan and colonial industry, of soon rendering the production more economical, and of developing the consumption of sugar, as yet behindhand with us.

The principles on which all these improvements rest, appear to me incontestible. Their application would demand, without doubt, serious studies in each one of the localities which would present peculiar circumstances; but a similar study, undertaken by competent men, would be neither very long nor difficult at the present day.

ART. III.—MISSISSIPPI VALLEY.

WATER-METER.

As CONNECTED with the permanent improvement and thorough understanding of the river Mississippi, the water-meter is an object of the first importance.

The water-meter consists generally of a rod of wood or a bar of iron, placed in a permanent situation, where it can be perfectly secure. Intended to show the height of a river's surface, it must be so divided or marked into feet and inches, as to be seen distinctly and read easily, as it should be observed and noted every day, and as nearly as possible at the same hour on each.

The water-meter should count upward, and the cypher-point be placed at least two feet below the common low water mark, so that even at the lowest stage of the river we may still count up. This placing of the cypher-point is the more advisable, as the surface of a river is often lowered by the correction of its course.

The date, and even the hour, of these observations should be recorded, for such tables will show the changes which have taken place in the height of the surface at a high or low state of the river: whether these changes have been occasioned by a correction of its course, or by the diminution of the quantity of water which the river discharges in a certain time. Without such observations, carefully noted during a number of years, we cannot correctly judge of the variations in quantity of water which is discharged from any river.

In Egypt this plan was adopted centuries ago, and continues in use at the present time. At Syene, at Memphis, etc., on the Nile, there are regular columns of stone placed in the river, and provided with a scale, from which the rise and fall of the river is observed and recorded by persons employed for that purpose. These are commonly called Nilemeters, and from them it has been calculated that the deposits which have elevated the valley of the Nile, form a layer of upward of four inches in a hundred years. In Europe similar tables have been kept, on the Elbe since 1831, on the Rhine since 1771, and on the Oder since 1781. From all these we may fairly infer the utility and even necessity of such observations for the general good of the country. The past is a safe teacher of the future.

As far back as 1818, I strongly urged the erection of water-meters in the Mississippi valley: and when building the pump-house of the Cincinnati Water Works, I placed one of them upon its wall and had a cross cut into a stone of the building, some feet above the cipher-point, that in case of accident it might be replaced at the exact same height.

Observations of the height of the river's surface are of the greatest importance, for no kind of work upon it can be properly constructed without due consideration of its rise and fall. By these we estimate the height of the levee, the depth of the bed, and the required elevation of works for regulating the course of a river. By comparing the observations made at different points, we become acquainted with the peculiarities and the effects which lateral streams produce on the main river. The different rises of the several points show what influence the bed and the valley have, and place us often in a situation to guess the cause of an existing evil. In fact the hydrotect who has charge of any works for the correction of a river must be guided by observations on the rise and fall of its surface. They not only serve to show whether the waters remain unchanged; or how far they have become higher or lower; but they tell, also, the progress of the flood, or in what time it passes from any one place to another.

The great importance of having proper water-meters along the course of the Mississippi, as well as lateral rivers, or tributaries, is as obvious as it is that to make them truly valuable the utmost care must be observed in keeping their records accurately. The observations made at the same hour, daily, and recorded by persons employed by the Government, should be regularly transmitted in copy to the proper officer and by him recorded, and duly preserved, in the State papers.

It surely would be in the province of every governor of a State to bring this subject before the respective legislatures, so as to have these water-meters erected along the course of all principal rivers, in such places where they would not be subject to injury; and principally where no accumulations take place that might require the removal of both, as neglect or carelessness may thereby derange all former observations. And let it not be supposed that a painted wharf-post or a marked tree can ever be adequate to the object in view, for both are constantly perishing and hourly liable to removal. That only, which, like the Egyptian's column, is permanent, can insure us certainty.

ALBERT STEIN.

Mobile, August, 1849.

ART. IV.—PUBLIC IMPROVEMENTS OF CHARLESTON.—Part 2.

1. FACTORIES.

My last closed with a passing reference to the condition of the industrial arts in Charleston. The establishment of the Mechanics' Institute has drawn public attention more directly to the importance of fostering all enterprises by which the cause of home industry may be promoted. We have energy and capital among us, sufficient to place us on a respectable footing in this comparatively new line of effort. Serious barriers, however, still remain to clog and discourage the public spirit of those who have entered upon the task. Many object (and it is perhaps the most weighty objection that can be urged) to the increase of factories, on account of the encourgement they afford for the influx of that description of population, from the evils of which we have been so far exempt; while in the northern cities it furnishes prolific material for mobs and rowdyism, as the records of the times abundantly prove. Others continue skeptical as to our ability to compete with our neighbors in manufacturing, on account of our inferior facilities, and not a few consider the interests of agriculture and manufactures as inevitably opposed. But I am sure the prejudices of a portion of the people must have been, by this time, in a great measure removed by what has already been realized here. The Charleston cotton factory (located in Hampstead), has been in operation about two years: its capital is $100,000. At the late fair of the State Agricultural Society, held at Chester, the premium (a silver medal) was awarded to this Company for *the best specimen* of goods exhibited on that occasion. The agent is our fellow-citizen, James H. Taylor, esq., whose active exertions, as well as sound and sensible writings on the subject of manufacturing, have been usefully directed to its advancement. There has lately been recorded at the agency, for sale, several hundred cases of handsome garment prints, new styles and neat patterns; $\frac{4}{4}$ and $\frac{7}{8}$ brown shirtings; extra heavy shop twine; batting, etc. The factory is worked by white operatives and conducted with great discipline, order and decorum. Its situation is very beautiful, on the summit of a rising ground, in a retired, rural spot, surrounded by green lawns and tasteful gardens and overlooking the broad expanse of Cooper river, which laves the eastern side of the city and suburbs. There are several churches and schools immediately adjacent.

This establishment is destined to attain a height of prosperity far exceeding the most sanguine expectations of its projectors.

The SUGAR REFINERY in Anson street, is in active operation. The buildings have been much improved and enlarged.

Messrs. B. F. Smith & Co., are the proprietors of the *South Carolina Turpentine Distillery*. They manufacture the finest soap resins. Their spirits of turpentine is prepared by a patent process of their own. It had the preference over all others in every market to which it was shipped last season. A thriving business has been carried on by these gentlemen during the past year. The growing interest in the manufacture of turpentine, which prevails throughout our State, has induced many of our planters and others to embark in its prosecution. The results of experiments made by various gentlemen from North Carolina, who have examined the pine forests of South Carolina and Georgia, prove, that no region of the world offers greater inducements to engage in the business, than the pine lands of these two States. One writer says, the yield, both in respect to quantity and quality, is equal to any thing he has ever seen in North Carolina. Besides this, the proximity of these lands to navigable streams and railroads, connecting with seaport markets, where the article will always command remunerating prices, will afford easy facilities to our planters, and open to them a new avenue of industry, which will in time add greatly to the growth and prosperity of the State.

2. WHITE POINT BATTERY.

Our fashionable summer evening promenade has been undergoing some transformation. A sea wall is in progress around its entire southern boundary. It is proposed to substitute for the present inconvenient flooring, a paved walk, thirty feet in width and more than five hundred feet long. Col. E. B. White, a native architect of skill and long experience, superintends the erection of the wall, which is of *concrete*, a material better adapted for the purpose than granite or brick, more durable and economical, and capable of greater resistance to the action of salt water and the atmosphere. It has been extensively used by Captain Bowman, the engineer, in charge of the harbor fortifications, and forms a portion of the much admired work of Fort Sumpter, the noble structure near Sullivan's Island, now rapidly approaching its completion. The concrete is composed of shell, gravel, cement and lime putty. While in progress and hardening, the materials are protected by a casing of planks, within which the mass is rammed firmly and secured from exposure, until it becomes well indurated. The wall is six feet wide at the base and two feet at the top.

There are few more attractive places of resort furnished by our large cities, than this invigorating summer retreat. On moonlight evenings it is a scene of life and animation. Music, refreshments, parties of pleasure, steamboat excursions, fireworks and sometimes boat races, are all elements in the grand mass of social enjoyment and recreation. Council deserve the thanks of all of us for the energy and zeal they have displayed in promoting these sources of comfort to their constituents.

3. CITADEL FORTIFICATIONS.

By an act passed 20th December 1842, the arsenal at Columbia and the citadel and magazine at Charleston, were converted into military schools. The board of visiters consists of the governor of the State and five others appointed by him, for the establishment of such regulations as are necessary for the strict military organization of the institution. Young men obtain here a sound, useful and practical education, which fits them for the active duties of life, as well as the science of military tactics. The military discipline to which they become habituated, confirms them in habits of subordination and regularity, while it ministers to their physical development and enables them to endure privation and exposure. Thus we have united two of the most indispensable elements of a thorough useful education—physical and intellectual. In point of morals, this body of young men will compare favorably and enviably with those of any institution of learning in the Union or in the world. The number of cadets has so greatly increased as to render the enlargement of the buildings, so as to provide more extensive accommodation, indispensable. With this view, arrangements have been already entered into, and the busy hum of improvement is to be daily heard upon the premises. The main building is to be raised a story higher, making three stories, and will be finished in a very handsome and appropriate style; nothing gaudy or "ginger-bread" work, but stately, imposing, and strictly architectural—such as best becomes a castellated fortification—combining neatness with facility of accommodation. In front of the citadel is a spacious public square, which laid out in grass plots, or planted in trees, would form a beautiful contrast, and relieve the present barren and unattractive appearance of the premises, without affecting its usefulness as a parade or encampment ground.

4. RAILROAD DEPOT AND WORKSHOPS.

In consequence of the increasing business of the South Carolina Railroad, arrangements have been made for the construction of more commodious buildings and workshops, to supply the place of the present, limited establishment. The plan combines utility and chasteness of design. The space occupied for delivery and storage of merchandize has been enlarged, and the accommodations for passengers and the business offices of the company materially improved. The builders have been for some time at work, and it is expected that the entire structure will be completed previous to the return of the busy season.

A happy combination of the substantial and ornamental, imparts to the whole structure an imposing effect. The architect is Mr. Edward C. Jones, a young native Charlestonian, who, to a natural taste for his profession, adds fixed habits of industrious study, and some practical experience.

5. STEAMBOAT LINES.

Lines of steamers run regularly between Charleston and the ports of New York, Philadelphia, Baltimore, Wilmington and Havanna. Boats of a smaller class are in operation between Savannah, Cheraw and Georgetown. Several new and handsome steamers are in course of construction for these lines. The Osprey (between here and Philadelphia) is a side paddle-wheel steamship, built of white oak, copper-fastened, excellent model and unusual speed. Her engines are of the pattern of Todd and McGregor, extensively used between England and Germany, substantially supported upon heavy kelsons and capable of driving the ship in all weathers. Her cabin is tastefully arranged for the comfort of passengers, airy and spacious, two berths in each stateroom. With the elegant accommodations, speed and regularity of the New York boats, the Northerner and Southerner, we are all well acquainted.

The steamship Republic is in course of building, in Baltimore, to run between that city and Charleston. She is two hundred feet long, thirty feet beam and eighteen feet depth of hold, two oscillating engines of two-hundred and fifty horse power, bark-rigged; to run fourteen miles per hour. She will accommodate one hundred and fifty passengers with state-rooms and berths, fitted up in elegant style. Messrs.

Murray & Hazelhurst are the builders, and Capt. Hobbs the commander. [There will then be a daily line of steamships to northern ports.—ED.]

Marsh & Son, of this place, are building a new steamer for the Pee-Dee trade; one-hundred and thirty-two feet in length, thirty feet beam and eight feet hold; draft 5 feet with 1,500 bales of cotton on board. She will have two engines of 175 horse power, and to be built of the very best materials.

By an ordinance of the city, all steam vessels plying within the harbor, are required to be provided with effectual and suitable spark-arresters, attached to their smoke-stocks, or chimneys, on penalty of one-hundred dollars for neglect; the construction and fitting up of the same to be approved by council, and to be renewed, repaired or altered by their direction, as circumstances may demand.

The commanders of these vessels are able, energetic and skillful in their profession. We never hear of accidents of any moment occurring under their management; and as to the boats which ply about the harbor and rivers in our vicinity, I cannot call to mind a single instance of carelessness or incompetency, although the island and ferry boats are running in all weathers and seasons, almost every hour in the day. It will be acknowledged, then, without hesitation, that we are, in this respect, much more favored than our brethren traveling on the western waters.

6. PENNY-POST.

The penny-post, established by authority of the Post Office department, works well. We can now have our letters conveyed to any portion of the city or Neck, by depositing them at the various branch offices, at two cents per letter, the rates prescribed by Congress. The want of such a system has long been seriously felt in this community, and in proportion as the upper part of the city continues to increase in population, it will become more and more a public benefit. Dr. John H. Honour is the superintendent. His success has so far exceeded the expectations of his friends, and deservedly rewarded his industry and public spirit.

7. NEW PUBLIC AND PRIVATE EDIFICES.

It is not only in great public works that a new impetus has been given to the department of labor. Private munificence has erected and aided in the completion or advancement of many elegant and substantial edifices, which adorn various portions of the city and Neck. We have no less than seven churches, either recently completed or in progress, or in process of enlargement. St. Philip's Church (Episcopal), through the liberality of a wealthy and benevolent donor, has been furnished with a clock and chime of bells, altogether rare and novel in construction, which are to occupy a portion of the lofty steeple now towering to a considerable height. The steeple will be, when finished, two-hundred and ten feet in height (twenty feet higher than St. Michael's). It is now quite a conspicuous object on entering the harbor. Grace Church, Wentworth street, built after the Gothic style of architecture, has been, for nearly a year past, open for public worship. Its steeple is yet in course of erection. The Third Presbyterian Church, Meeting street, presents an imposing front, with its massive columns, and will be completed in a few months. Calvary Church (Episcopal), Beaufain street, is completed, with the exception of a small portion of the inside work. The Glebe street Presbyterian Church has been recently finished entire. The Second Presbyterian and English Lutheran churches have been lately replastered and materially improved in appearance.

We are well supplied with hotels and private boarding houses. The CHARLESTON HOTEL has been lately handsomely fitted up, with new furniture; and also STUARTS & LEE'S, in Broad street. Besides these, we have the PAVILION, in charge of Mr. H. L. Butterfield, the sole proprietor; the old "PLANTERS'," on Church street; the "AMERICAN," at the corner of George and King streets, which has been greatly improved in architectural beauty, and well conducted, by Col. D. Hoke, from North Carolina; THE MERCHANTS', kept on *strict Temperance principles*, by our worthy and deserving fellow-citizen Thos. Steen, Esq.; the "VICTORIA," in the "Range," between Market and Princess streets; the MANSION HOUSE, by Mrs. Davis, corner of Meeting and Queen streets. All these establishments have been newly fitted up or added to within the last year, and rendered comfortable for the accommodation of persons visiting our city.

The Sons of Temperance have procured and handsomely furnished a new Hall, on Wentworth street, for the weekly meetings of the order. The hall of the Apprentices' Library Society has been improved and lighted with gas. Another hall for the Odd Fellows is in preparation, at the corner of King and Liberty streets, to be finished in the latest style of architecture, under the direction of Col. E. B. White, a practical architect of considerable experience. An important addition is to be made to the steeple of that elegrant structure, the Military Hall, Wentworth street, by placing in it the large alarm fire bell, ordered by the council, for that portion of the city. St. Andrew's Hall, which has always been the popular assembly room for balls, concerts, parties, etc., has been ornamented with three elegant chandeliers with gas burners, in the large hall, and additional lights in the side rooms.

W. T. Potter, Esq., one of our public spirited citizens, has recently erected, just beyond the limits of the city proper, a Market and Ice House, for the accommodation of the residents of the Neck and upper part of the city, which it is thought will be a very profitable investment to the proprietor, as well as a great convenience to the public.

These are a few of the many improvements in progress or contemplation in our little city, and I am making no vain boast, Mr. Editor, in saying, that old Charleston, is guiltless of many of the aspersions with which her cotemporaries appear to take delight in branding her. In many important particulars she is, I acknowledge, far behind the age. But I think a new era is at last about to dawn upon her; slowly, but surely. Her railroads, steamships, magnetic telegraphs, gas works, cotton factories, sugar refineries and other improvements in the arts of industry, of which I have now endeavored to give you a lame and imperfect sketch, fully entitle her at least to combat the charge of Rip Van Winkle-ism.

Of her remarkable exemption from disease, mobs, et id omne genus, I will say nothing here, having already exhausted that branch of the subject, to the satisfaction of every unprejudiced mind. So, with my best regards to yourself and the few of your readers who have had the patience to follow me through, I leave her cause in your hands.

ART. V.—A SYSTEM OF INTERNAL IMPROVEMENT FOR THE WEST.

[WE take the following from that excellent periodical published at St. Louis, the *Western Journal*, edited by Messrs. Tarver & Risk. The paper is interesting in the whole valley, which we here extract.—ED.]

IN a country long inhabited, where the soil has been reduced to cultivation, the mineral resources ascertained and developed, and great commercial and manufacturing cities established, it requires but little intelligence or foresight to project and locate a system of internal improvement. In such a country, the utility or profits of a canal or railway may be calculated with as much certainty as any of the more common transactions of business. But in one like the United States, and more especially that part West of the Alleghany mountains, where but a small portion of the soil has been reduced to cultivation, and immense regions remain totally uninhabited—where the mineral wealth remains unexplored, and even the capacity of the rivers for navigation not well known—it requires much reflection and forecast to project a system of improvement that will be suited to the wants and demands of the country, when more generally settled and its resources more fully developed.

We must first project a system of commerce corresponding to the physical geography, climate, mineral resources, soil and vegetable productions of a given region; and, also, to its relative location in regard to other countries, before we can arrive at correct conclusions in reference to a system of internal improvement. For, roads and canals being designed as the agents of commerce, should be so located as to conform to its laws and facilitate its operations.

To enable us to comprehend the philosophy of commerce, we must consider it as one of the great agents of civilization, designed to establish social intercourse and sympathy between the inhabitants of every part of the earth; to the end, that one great principle of moral and social action may everywhere prevail. To enforce this design the products of the tropics were made to differ materially from those of colder climates; while the convenience and comforts of the inhabitants of these respective regions were made each to depend, in a great measure, upon the enjoyment of the products of the other.

Owing to this provision in the economy of nature, the products of the South seek a market in the North, while those of the North go South for consumption. But, as the products of the extremes find a market also in the central region, this is indicated as the natural and most convenient place for all parties to meet and exchange their commodities. Hence, the natural and prevailing currents of commerce flow from the extremes of North and South toward the center, and again outward, distributing to each region the kind and quantity of commodities required for their consumption. This is the first great principle to be observed in a system of commerce; but owing to the irregular distribution of the minerals, soils, and waters, this principle is subject to many modifications, which diversify and give to certain branches of commerce every possible direction; yet these are but tributaries of the main current, and when united with it, conform to its laws.

In Asia and Europe, the nature of the social institutions, and the great number of nations differing from each other in their laws, genius, and habits, have tended to countervail and thwart this primary principle of commerce; and it is partly owing to these causes that civilization has been so long confined to the more temperate regions.

Among the many advantages which the inhabitants of the Valley of the Mississippi enjoy, there is, perhaps, none more important than that which arises from the fact that an entire natural division of the continent, extending through twenty degrees of latitude, with its system of water courses, from their sources to their final outlet to the ocean, is under the control of one government, inhabited by the same race, speaking one language and professing one religion.

When we contemplate a map of this region, it appears plainly, that nature has delineated the outlines of a system of improvement, conforming to the principles of commerce which we have endeavored to illustrate; but she has left the details to be filled up and carried out by the intelligence, enterprise, and industry of its inhabitants.

The Mississippi river, running from North to South, divides the valley into parts nearly equal, and constitutes the great commercial thoroughfare of this region; and should be regarded as the basis of a general system of internal improvement for the whole West, if not, indeed, for the entire Union. On this river, and within the central region, will be located the great commercial city of the valley—the place of exchange between the North and the South—the center of a great system of internal improvement, as well as of commerce.

But in a region so extensive and so abundant in all the elements of wealth, there must be many great commercial cities, each having their own scheme of internal improvement; but still connected with and constituting a part of, the general system. Cincinnati, for instance, has already projected a system of improvement of her own, and with a forecast and enterprise uparalleled in commercial history, has made rapid strides toward its completion. But she does not deem her system complete, without a connection by railroad with the Mississippi, at St. Louis; for this will bring her into full and complete communication with the great system of the valley. She is becoming a great producer, and it is her true policy to extend the facilities of distributing her products. When these arrive at St. Louis, they are then at the center of the great commercial system, and may be thence distributed throughout its remotest range, to every point where a market can be found. In like manner, a great commercial city will, in time, grow up near our western border, on the Missouri river. This must also have its own system of improvement; but still constitute a portion of the general system, by a connection with the Mississippi river. The principal towns and cities on the Mississippi will also project systems of their own, calculated to accommodate the country around them; for, in a region so extensive as this, if it were even practicable, it would not be good economy to locate every work so as to lead directly to the center.

It is not a little remarkable, that all the principal cities on the Atlantic coast, when projecting systems of internal improvement adapted to their respective locations, should have aimed to connect their commerce with that of the Mississippi river; and if we trace their routes as procribed on the map, we shall discover that they all converge to a point in the central region. The railway from Charleston, in South Carolina, uniting with that from Savannah, in Georgia, will be completed, in a few years, to Nashville, in Tennessee, opening a communication with the Mississippi through the navigation of the Cumberland and Ohio rivers. But it is obvious that this line of railroad will not stop at Nashville; for she will have a system of her own to build up, and will aim to connect with the Ohio river near the mouth of the Wabash, so as to be brought in a more direct communication with the East, and the lakes of the North. This point being reached, the importance of a connection with a road from St. Louis to Louisville, or Cincinnati, will appear so obvious and important, that this short section will doubtless be completed, and thus Charleston and Savannah will be connected, by means of a railway, with the great western system at St. Louis. Again: the road from St. Louis to Louisville, Ky., connects with the system of that city, and the improvements now contemplated in Kentucky, uniting with the road from Richmond, Virginia, to the Ohio river, will open a continuous line from Richmond, also, to St. Louis. This is likewise the natural terminus of the lines of improvement from Baltimore and Philadelphia, the former pursuing the valley of the Ohio, and the latter traversing the central region between the Ohio river and the lakes. It will not be long before New York and Boston will be connected by a line of railroad with the Mississippi, at Galena; but it is quite certain that these great cities will not be content to confine their operations to the North, and give to Philadelphia and Batimore full possession of the great central region. A line of railway from the Western end of Lake Erie to St. Louis or Alton, will let them into the heart of the country, and no work in the valley would, perhaps, be more profitable to the stockholders. If the line of railway now in contemplation from Alton to Springfield should be completed, it will, doubtless, be extended sooner or later, so as to intersect with the Michigan road from Detroit to Chicago; and the Michigan and Illinois Canal may also be regarded as another branch of the same system. Again: the railway in contemplation from Mobile to the mouth of the Ohio river, will connect the waters of Mobile Bay and the intermediate country with the commercial system of the valley of the Mississippi as completely as though the road were continued to St. Louis.

Should all these works be completed, one who was a stranger to their history, would very naturally conclude that they had been projected by the people of St. Louis, and designed for her especial benefit; and would be astonished to learn that the inhabitants of this place had no hand in the matter, but that each project was conceived and carried out mainly by those residing at the extreme ends of the respective lines, and without concert with each other.

But we have digressed somewhat from our subject. We set out with the intention of saying something in regard to a system of improvement for our own State—a subject about which much can be said, but toward the consummation whereof we fear little can be done for many years yet to come. We are the advocates of every improvement that can in any way promote the development of our vast resources; but we must not permit our zeal to beguile us into the advocacy of impracticable or unprofitable schemes. In this age of steam and magnetism, few individuals can limit their views of internal improvement to any thing short of a railway; this is quite natural, but it may well be questioned whether a railway can be constructed between any two points in Missouri with a fair prospect of reasonable profits to the stockholders, for many years to come. There is at present no point in the interior of sufficient commercial importance to afford a fair business to an extensive railway, and the country is not sufficiently settled in any direction, except, perhaps, near the Missouri river, to afford much business on or near the line between any two given points. It is probable, however, that the business of the western counties in the region of the Missouri river, would sustain a road from there to some point on the Mississippi, were it not that boats on the Missouri would still continue to carry a large portion of the freight; but it is quite certain that during the season of high water in the Missouri, a railway could not compete successfully with the river navigation. None can doubt the advantages of such a work to the country, but we apprehend that few would be found willing to invest their money in stock without a reasonable prospect of fair dividends.

The most plausible route for a railroad in Missouri, in our opinion, is on the line between St. Louis and the Iron Mountain. The demand for iron at St. Louis, would, in all probability, be sufficient to support this road; and the material is doubtless sufficient in quantity to supply any demand for centuries to come; and were a railway constructed between these two points, it would probably stimulate the production of iron to an extent sufficient to afford a fair business on the road within a short time after its completion. If, when the proper estimates shall be made, it should be ascertained that such a result could be relied on, no other enterprise that could be projected at an equal expense would tend so much to increase the wealth of the State. The line traverses a country more abundant in mineral wealth than perhaps any other of the same extent east of the Rocky Mountains; and besides iron, lead, and copper—granite, marble, timber, and fuel would constitute considerable items of transportation; while all the profits arising from these latter articles may be regarded as a clear gain to the wealth of the country.

Where transportation cannot be obtained by water, railways are to be preferred for the transportation of all heavy mineral products, building material and fuel, wherever it is necessary to move these commodities beyond the distance of a day's drive with a common team; for, inasmuch as those who are engaged in producing and preparing these commodities for market do not produce stock and grain, the cost of transportation, whether with their own or by the teams of others, is so much to be added to the cost of producing the article; and whether it materially affects the profits of the producer or not, it must, in the end, be paid by the consumer; and it is to be observed, that the same principle enters into the transportation of all commodities, after they have passed from the hands of the producers. But in a country where agricultural labor and agricultural products are redundant, it is the true policy of the farmer to use his own teams in the transportation of his products, although he may not gain in money quite as much by the operation as would be esteemed a fair price *per diem* for his teams and drivers; but there is a limit, of course, beyond which this policy cannot be carried with profit. Few farmers, under the most perfect system of railroad or canal improvement, can dispense altogether with the use of their teams; and, therefore, the great point to be aimed at, is to extend, as far as practicable, the distance that these teams can be made profitable in transporting their crops. This is the principle which enters into the economy of constructing macadamized and plank roads; for any improvement that enables the farmer to increase the load or rate of travel, is so much directly gained to him, and indirectly to the community.

If the rivers of the State of Missouri were improved by dams and locks, so as to afford slack water navigation as far as practicable, there would exist no great necessity for railways; for such improvements in connection with macadamized or plank roads, would afford the means of transportation to every part of the State. This is a system strongly indicated by the geography of the country, and is, in our opinion, better calculated to promote the agricultural interest than any other that could be devised with a reasonable prospect of being carried into effect. Such a system could be carried out with our own labor, and without the use of any foreign material. These are important considerations; for, by furnishing all the appliances necessary to the consummation of the system, we should avoid that state of pecuniary embarrassment which has almost everywhere attended the construction of extensive railways.

The subject of plank roads is exciting a good deal of attention in some parts of the Union, and the opinion seems to be rapidly gaining ground that they are in all respects better than macadamized roads; and preferable in an economical point of view to railways, for short distances, except, perhaps, over great thoroughfares of traveling, and between points that furnish constant and large supplies of freight. In timbered districts they can be made for perhaps less than one-half the cost of macadamized roads, and do not require as much to keep them in repair. In the State of New York, where they have tested every mode of improvement for the transportation of both freight and passengers, plank roads are rapidly growing into favor. We copy from the Lexington Express the following article, which that paper credits to the Utica (N. Y.) Herald, for the purpose of showing the favorable opinion entertained of plank roads in that part of the country:

> Success of Plank Roads.—The people of this section are now reaping the benefit of the Plank Roads. We have now extending from this city four distinct lines of plank roads—one extending to Boonville, on the north, a distance of thirty-two miles; one to Bridgewater, about 20 miles to the south, and soon to be extended twenty miles further; another to Waterville, twenty miles southwest and to be extended fifteen miles more to Hamilton, and the fourth extending westward to Rome, sixteen miles, and forming, by junction with others at Rome, an uninterrupted plank road communication with the nothern parts of Oneida and Lewis counties, and Lake Ontario and Salmon river, in Oswego county. There are also several direct and lateral extensions of this line now in progress and in contemplation, which, when completed, will link the extreme southern counties of the State, and open an easy and rapid communication between sections which have hitherto enjoyed but little intercourse with each other. All the plank roads that have been put into operation in this State are doing a prosperous and profitable business. The roads in this section are all reaping a rich harvest of toll. We mentioned a few days ago that the Rome and Oswego road had divided six per cent. on the profits of the last six months. We learn that, after paying this dividend, one-third of the tolls have been invested as a sinki

fund, thus making the earnings of the road during the half year about nine per cent. on the capital stock. The entire cost of the road was about eighty-five thousand dollars. Since its construction a very large proportion of the travel reaching Oswego by way of the lake has gone over this route. We notice recently in a Milwaukie, Wisconsin, paper, that the receipt for tolls on the Chicago plank road already amount to one hundred dollars a day, and it is yet completed only about twelve miles.

We have seen it stated that plank roads were first used in Russia—they have been used in Canada for many years, with success; and if we should conclude that their utility has been fairly tested, and that they are equal to their reputation, they are, doubtless, better adapted to the condition and general economy of our State, than any other mode of improvement yet discovered. And, withal, so little skill is required in their construction, that the farmers in a well settled neighborhood might, in a few years, by their own labor, construct all the roads necessary to their convenience, without drawing materially from the labor of their farms. By the use of moveable saw mills, the plank may be cut on the road; and, in timbered districts, could be afforded as cheap in Missouri, as in any part of the Union.

There is another advantage attending the construction of plank roads, arising from the fact, that whatever work may be done at any one time, may be completed and applied to immediate use. This will enable neighborhoods or companies to progress with the work by adding sections from time to time, according to their means, while it ensures to them also the full benefit of all their labor.

From the foregoing considerations, we conclude that the improvement of our rivers, as far as practicable, constitutes the first important step in our system; and that the construction of plank roads, so as to unite with navigation at convenient points, will perfect a system more beneficial to the State than any other, perhaps, that could be devised in our present condition.

We are aware that the navigation of the Missouri is difficult, and at some seasons impracticable, for all useful purposes. We know, furthermore, that an opinion is generally entertained, that it is not susceptible of improvement, beyond the removal of logs and snags; but until a survey shall have been made, and the causes of obstruction fully examined and considered by scientific individuals, we are unwilling to adopt the opinion that a stream affording so large a volume of water, and unobstructed by rocks and shoals, cannot be rendered navigable at all seasons of the year, ice excepted.

As the first step toward the establishment of this system, we respectfully suggest that a thorough and skillful survey should be made, of all the rivers within our borders, with the view of testing the practicability of their improvement; and further, that a general law be enacted, authorizing the formation of companies for the construction of works of internal improvement, under such limitations and restrictions as will be calculated to protect the community from the abuse of the privileges conferred.

The importance of enlarging the facilities of transportation is felt and admitted by every intelligent citizen with whom we have conversed; but we have met with no one who seems to have matured, in his own mind, any plan of operation. Much—indeed, we may say that every thing—depends upon beginning at the right point; and to do this, we must first ascertain the true nature of the facts connected with the subject. When these shall have been acquired, we can then begin to reason intelligently, and our conclusions will be sound and entitled to respect. It is the duty of the State to cause the proper facts to be ascertained and laid before the people, and this can only be done by the employment of competent engineers to survey our rivers; and we trust that the importance of this measure will be duly considered by our General Assembly now in session. We believe that surveys have been made of some of our rivers and probably of all; but as we have seen no report by the engineers, we do not know whether these surveys are anything more than reconnoisances, or whether they were made with sufficient accuracy to afford estimates that can be relied on as a basis of calculation. It is a trite saying that "time is money," and it may be truly said that for all human purposes, time is power; but it is a power little susceptible of concentration. If the present generation desire to associate their names with the improvement of the State, and to enjoy the benefits to be derived therefrom, they should enter upon the work without delay; for if they postpone the initiatory step until another session of the Legislature, they will then have lost two years, and, consequently, a considerable portion of the power allotted to them for useful purposes.

One of the common errors committed in the prosecution of great public works, arises from a desire to execute too much within a given time: this is simply a miscalculation of power, a mistake that would not be likely to happen were the projectors thoroughly conversant with all the facts touching the subject. But it frequently happens that the work of internal improvement is delayed by a State or community until the necessity of its construction becomes so obvious and urgent that they are finally entered upon suddenly, and without either the information or means necessary to ensure success. Incited by such causes, efforts are made to execute in perhaps two or three years, works that could not be conveniently and well done in ten—in such cases disappointment and loss necessarily ensue; and the project fails entirely, or the deficiency of power must be supplied by anticipating the future, and drawing upon the resources of the next generation.

In presenting our views on the subject of internal improvement in Missouri, we desire to be understood as offering no discouragement to any project that has been contemplated in any part of the State: we should be happy to see each and all carried into successful operation, and shall be pleased to receive and publish communications in regard to the merits of any improvement projected or contemplated in the State, or, indeed, in any part of the Union. The opinions which we have given are the result of many years observation and reflection, and if they should excite in the minds of our readers a more lively interest in regard to this important subject, we shall have accomplished all that we hoped for in the beginning.

There is, however, another consideration to which we wish to direct the attention of the reader before concluding this article. It will be recollected that we have endeavored to show that all the principle lines of improvement east of the Mississippi, converge to a point in the central part of this great valley. Now it will be obvious to every intelligent and unprejudiced mind, that this is the proper point at which a railroad to the Pacific should commence. And here we respectfully invite the attention of our readers to a series of articles on the subject of Eastern Commerce, from the pen of our talented contributor, J. LOUGHBOROUGH, esq., of Liberty, Missouri. These articles contain an account of eastern commerce from its earliest history to the present time, and present, we believe, the only plausible route for a railway to the Pacific, that has yet been suggested.

The project of a railway to the Pacifiic is one of such magnitude, that, notwithstanding our conviction of its vast importance and ardent desire to see it undertaken, we have refrained from urging it upon the consideration of our readers lest we should be looked upon as visionary castle builders. But since the legislatures of eighteen States have adopted resolutions in favor of Mr. Whitney's scheme, and select committees of both houses of Congress have unanimously reported in its favor, it cannot longer be fairly viewed as a mere chimera of the imagination; but is to be regarded as one of the probable if not certain enterprises of the age. Hence, there is no one subject connected with the public policy or economy of the Union, which involves so many interesting points for the consideration of the people of this country. The State of Missouri is especially interested in the location of the route as well as in the completion of the work; and her citizens would be unfaithful to themselves should they supinely submit the location and direction of the enterprise to others, without an effort to bring fairly before Congress and the people the advantages of commencing the route on the Mississippi river at some point within our own State. And we trust that our General Assembly will insist on the policy of causing the route to the Pacific to be thoroughly examined, under the direction of the General Government, before the nation commits itself in favor of any particular scheme.

ART. VI.—DUTY OF COTTON PLANTERS—CROPS OF ALABAMA AND MISSISSIPPI.

DELIGHTED am I once more to welcome your work to my table. Your well filled sheets deserve more than a passing notice, and yet I must forego the pleasure, from inability to do full justice. I fully echo the language of our friend, J. H. Hammond, ex-governor of South Carolina, and hope that the true friends of literature, commerce and the South, will give you everywhere a hearty welcome.

But, sir, I am seated for another purpose, though I could not keep down the warm feelings that demanded utterance. I wish to make a few remarks upon some of the articles in relation to the staple of the South—cotton.

Mr. Miles H. McGehee proposes to make the commission merchants our representatives, with power to fix rates, lower than which cotton should not be sold. To this I object. I am told that many commission merchants are agents to buy as well as to sell. How can they be fairly an arbitrator? They are said ot be purchasers: shall we risk our interests there? There has been so much misunderstanding between the planters of Alabama and the merchants of Mobile, that many refuse to sell there. Would all that people sanction such a movement?

Draw bills! This bill business is the very thing that ruins us. *Keep out of debt*, and *control your cotton.* This is my advice to planters. I know where seven cents was refused for a crop, and I had to take five cents. The writer was forced to sell, the friend was not.

Mr. Geo. G. Henry is, I think, a little too sanguine in his calculation of the crop of Alabama. I cannot understand where he gets 120,000 bales to be sent down the Tennessee river, and am not so sure about the 50,000 going down the Chattahoochee. And to deduct 60,000 bales, as all that Mississippi sends to Mobile, is going a little too far.

D. C. Glenn, esq., on the 41st page, says that Aberdeen, in Monroe county, shipped 40,000 bales. Now let us figure a little. The following counties, with a black population in 1845 over five years of age, as follows, ship their cotton, I suppose entire, to Mobile, besides many others sending a part.

Monroe, 537; Chickasaw, 2351; Lowndes, 8553; Oktibbeha, 2656; Noxuba, 7312; Winston, 1593; Kemper, 2723; Neshoba, 553; Lauderdale, 1320; Newton, 558; Clark, 830; Jasper, 1031; Smith, 512; Pontotoc, 1944; Itawamba, 990. Total, 38,000 negroes over five years of age. Deduct from this twenty per cent., as under age for field, house servants, &c.; and then add, for increase, say four per cent., with the white labor, and we have nearly 40,000 field hands, at four bales per hand, showing a receipt at Mobile of 160,000 bales, from the cotton banner State of Mississippi. But, sir, I think the crops of 50,000 hands now find their way to Mobile, fully as much as equal all the Alabama cotton that is not sent to that city. I have given the absolute census of the above counties in 1845, and I presume there can be no doubt, that any portion of the above counties which does not go to Mobile, is fully compensated by portions of other counties south of Smith and Jasper that do go there. I do not desire to detract from Alabama, but I claim for Mississippi all her own. Give to Mississippi 600,000 bales of cotton, with sixteen to eighteen millions of dollars, and we will see her in her true position.

The crop of 1848 staggers belief. Can the intelligent commission merchants of New Orleans, Mobile, Charleston, &c. &c., believe for a moment that the crop of 1848 did really reach 2,700,000 bales? I could not regard the man sane who would assert such a thing. I know of many men who held part, and some all, of 1847 crop, that never held up a bale before. And what respectable planter can point to such larger crops in 1848, or those of 1847, as to show this increase.

Commission merchants are told yearly by their friends: "I am bound to make a fine crop," "My prospects are very good," &c. &c. But do the shipments prove the fact? I make no charge; but I know when men owe money, they are led off by hope to over estimate—and honestly, too, I know, from the sad experience of many years.

I firmly believe that 300,000, or near these figures, were of the crop of 1847.* But that matters not. Increased consumption has gain-

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*** These 300,000 bales added to 1847, would make it too large; but some of '46 crop went with '47 crop.**

ed upon the increased product; and, even with a fair average crop, we may rely upon fair and remunerating prices for the south-western planter. Very much depends upon the extent of the crop, and very much depends upon the action of the merchants. Whilst factors, or agents or commission merchants, are interested in the purchase of cotton, as agents for foreign houses, or as buyers on commission, or as purchasers on their own account, we will most assuredly find them receiving reports the most favorable to their interests, and in giving them forth. Planters are as likely to be deceived as any other people, and when so much depends upon seasons, it should not be complained of them, that the crop turned out either less or more than their belief when giving out their impressions.

The greatest drawback upon the cotton planter's interest, is the yearly practice of drawing bills upon the coming crop. The planter is thereby forced to send his cotton forward, and the merchant wants the money to replace in bank, so as to get another loan for some one else, and he sells. Often he is compelled to sell, and very often loses for his patron one or two cents.

I do not think there should be any bowing or cringing from either planter or merchant. The planter needs the merchant, and is obliged to him for an honest, faithful discharge of his agency; the merchant needs the planter, and should be under as full obligations for the business entrusted to his care. Here is mutual obligation, and there should be mutual good faith and good will. But to insure this, the planter must preserve his independence; and that this is the only panacea I firmly believe. The cotton planters ask for but two things—fair play, and to be left alone to work out their own salvation.

With respect, I am yours, &c. M. W. PHILLIPS.

J. D. B. De Bow, esq.

ART. VII.—THE FORMER AND PRESENT TIMES AND TRADE OF NEW ORLEANS.

NEW ORLEANS IN 1822; EARLY EDUCATION AND PUBLIC BUILDINGS; COMMERCE OF THE CITY—RECEIPTS, PRODUCE, ETC.; CANALS, HOSPITALS, CHARACTER OF POPULATION, STATISTICAL TABLES OF TRADE, &c.; LAST FIFTEEN YEARS, AND CHIEFLY OF 1849.

[WE chanced the other day, among some old books, to find a Directory and Register of this city, printed and published in 1822, by John Adems Paxton; and, having published so much in regard to the present position, influence, etc., of New Orleans, we have thought some extracts from this volume might not be uninteresting to our readers. We shall, in the same connection, furnish the statistics, etc., of New Orleans trade for the present year, which swell out in magnificent contrast in the annual statement of our friends of the *Prices Current*, the ablest publication of the kind in the world.—ED.]

IN order to arrive as near as possible to the true population of New Orleans, I have made the following estimate, viz: there are in the city and suburbs 5837 dwelling houses, which, being multiplied by six and a half persons to each house, produces 37,930; but, taking the number of boarding houses into consideration, 40,000 would be more like the truth.

The population is fast increasing by accessions from all the States in the Union, and from almost every kingdom in Europe.

The places of worship are, the Catholic cathedral, built in 1794, a large brick building about seventy feet front by one hundred and twenty in depth, covered with a coat of white plastering, and ornamented in front with a steeple (surmounted with a gilt cross), in which is a striking town clock and bells. At the front corners of the building, on each side of the steeple, are turrets surmounted with cupolas. It is provided with an organ, and the interior is handsomely decorated with appropriate paintings and ornaments. In this church the victory over the British is annually commemorated, by *Te Deum*, on the 8th of January. On one side of the church is the City Hall, and on the other the Presbytere, two buildings with handsome and uniform fronts. These are situated in Chartres street, opposite the elegant public square, called "The Place of Arms;" occupying the whole front between St. Peter and St. Ann streets, and forming together a very handsome and pleasing aspect, particularly from the levée, where they can be seen to the greatest advantage. The chapel of the Ursuline Nuns is neatly decorated, and is situated in Ursuline street, below Levée street. There is a small frame Catholic chapel in Delor street, below Tchoupitoulas street. The Episcopal church, built 1816, is a neat brick octagon building, with a cupola, situated at the corner of Canal and Bourbon streets. It is provided with an organ, and in the yard is a monument of marble, with the following inscription. "The citizens of New Orleans, to testify their respect for the virtues of W. C. C. Claiborne, late governor of the State of Louisiana, have erected this monument to his memory, 1818." The Presbyterian church, a very handsome brick building, with a Gothic front, situated in the suburb St. Mary, at the corner of St. Charles and Gravier streets, has a belfry in which is a striking town clock, and is provided with an organ. The Baptist congregation hōld their meetings in the school house in Burgundy street below Canal street; in which place the Methodists likewise assemble. There are five burying grounds, containing many handsome monuments and tombs.

No place, comparatively speaking, is better provided with the means of education. It is a treasure within the reach of all, as the following enumeration of the various establishments will elucidate. The New Orleans College is a large building situated at the corner of Bayou and St. Claude streets, where the various branches of education, common to such institutions, are taught. There is a very respectable academy on the levée, two miles below town, under the direction of the Rev. Bertrand Martial, and several other gentlemen attached to the Catholic clergy, where sixty boys receive the benefit of their united labors. An excellent academy under the direction of the Rev. Dr. Hull, 2 Bourbon, below Canal street. Four schools on the very excellent plan of Joseph Lancaster, one of which, 77 Chartres street, under the superintendence of the Rev. Michael Portier, is an academy, with one hundred and seventy boys. A large brick school in Magazine street, under the direction of François F. Lafont. One, for young ladies, 27 Conti street, is very respectable. And one for colored boys and girls. There is an academy for young ladies in the convent of the Ursuline Nuns, where about sixty scholars receive the most accomplished education, *with the exception of* *dancing.* Twenty-five orphans are supported and educated gratis, in a separate apartment; and as many poor day scholars are admitted as apply. Likewise several other highly respectable academies, and forty-eight common schools, some of which are for persons of color.

Among the public buildings, besides those before noticed, are the City Hall, or Principal, with a front on Chartres street of one hundred and eight feet, built in 1795; in which are the city council chamber, city offices, and city guard. The city and State prisons are situated on St. Peter Street, in the rear of and adjoining the City Hall. The Presbytere, with a front on Condé street of one hundred and fourteen feet, built 1813, in which for the present the Supreme, District and Parish Courts, hold their sessions. The Government House, built 1761, where the Legislature meets, and in which is the treasurer's office and the Orleans Library, of about six thousand volumes. The Custom House is a spacious plain brick building, with a coating of white plaster, situated on the levée, where, besides the offices connected with the customs, are the U. S. District Court room and offices of the U. S. District clerk, attorney, marshal and land. The Charity Hospital, Canal street, is a large building erected in 1815. The Ursuline Convent, built 1733. The New Orleans College, built 1812. The Market House is a neat building, situated on the levée, near the Place of Arms, contains more than one hundred stalls, is about three hundred feet long, and was erected in 1813. The Orleans Theater, with Davis's Hotel, and the Orleans Ball-room, is a considerable pile of brick buildings, first erected in 1813, destroyed by fire 1815, rebuilt and finished with a very handsome front and interior decorations 1816. There are dramatic performances here almost every night throughout the year, by full and respectable French and English companies, who play alternately. The St. Philip street Theater, a neat brick building with a handsome interior, was erected 1810, and is likewise performed in by English and French companies. It was altered and used last winter, for a short time, by Mr. Pepin's company of equestrians. A new frame Circus, seventy-five by eighty feet, building for Mr. Pepin, was nearly finished when it was razed to the ground, by a whirlwind of April 26th of this year: there is no doubt but it will soon be rebuilt.

The public expectation, for a long time manifested, for an American theater, in that part of the town chiefly inhabited by that population, will soon be realized. Mr. Caldwell (the manager of the American theater) has purchased ground between Gravier and Poydrass streets, liberal subscriptions have been made, and it is said the foundation of a large and elegant edifice, to be styled the *American Theater,* will be laid in June next. A new brick market house, forty-two feet in width, by from two hundred to two hundred and fifty feet in length, is to be built immediately on the upper end of the Batture, between St. Joseph and Delor streets. A new and handsome brick building is to be erected at the corner of Orleans and Bourbon streets, for the accommodation of all the courts and public offices of this parish. It is contemplated to build a corn and vegetable market. The State Bank is a neat brick building with a coat of white plastering; and there are two other banks, kept in buildings that were formerly dwellings, altered for their reception. The Louisiana Insurance Office is a small but neat brick building. There is a U. S. Navy-yard and stores, a Marine Barracks, quarter-master's stores, and an Ordnance Arsenal, with a great number of mounted field and battering cannon, mortars, shells, balls and other implements of war. There are five good-looking buildings, erected exclusively for the accommodation of different lodges of Freemasons, all of which are commodious.

Mr. Benjamin Morgan followed Mr. Rillieux, in the important experiment of improving the highways, by paving Gravier street with pebble stone, between Tchoupitoulas and Magazine streets; which was so well executed as to stand the test of some years, and has convinced every thinking person of its utility. The present corporation deserve the thanks of the citizens of New Orleans, and all strangers who visit it, for the great exertions they have used to improve the health of the city, and add to the comfort and convenience of the inhabitants, by paving the streets. This year the general paving of the city was commenced, and already the whole of Chartres street and parts of Condé, St. Peter and St. Ann streets, are finished in the most substantial and workman-like manner, with curbstones and raised side walks. It is contemplated to progress in the paving annually, and, as an inducement to persons to bring paving stone in their vessels as ballast from the eastern cities, the following notice was published by the corporation: "Resolved, that the Mayor of the city of New Orleans be authorized to pay three dollars and fifty cents per ton for good paving stone, from the first of May, 1822, until the first of May, 1823, and to receive the said stones on the decks of the ships having the same on board."

The annual revenue of the corporation is about $130,000, which sum is employed in the necessary expenses and improvements of the city.

During the year 1821, the following amount of tonnage from foreign countries was entered. American, 51,458 tons; British, 16,216; French, 1186; Spanish, 551; Dutch, 383; Hanseatic, 2,139; Danish, 1,962; Swedish, 559; Hanovarian, 288—making a total of 74,742 tons.

During the same year the following amount of tonnage was cleared: Tonnage of American vessels in foreign trade, 45,181; of foreign vessels, 21,407; of American vessels in coasting trade, 71,158—making a total of 137,746 tons.

Value of articles, the produce or manufacture of the United States, exported from New Orleans in the following years: 1815, $9,749.253; 1816, $8,773,379; 1817, $13.501,036; 1818, $16,771,711; 1819, $12,637,079; and 1820, $11,961,067.

In the year ending October 1st, 1817, 1,500 flat boats and 500 barges, &c., came down the Mississippi to this place, loaded with produce.

The following statement will show the arrivals of loaded steam boats, barges, keel and flat boats, within the limits of the city, in 1821, from the upper country; together with the amount of wharfage or levee duty, paid to the city corporation.

	Steamboats.	Barges and Keels.	Flat Boats.	Levee Duty.
January,	34	23	36	$684
February,	36	19	57	801
March,	34	40	80	966
April,	37	14	86	1513
May,	28	15	122	1677
June,	21	11	32	712

July,	14	6	6	375
August,	8	1	6	224
September,	6	0	1	140
October,	13	6	6	211
November,	18	12	7	335
December,	38	27	2	634
Totals,	287	174	441	$8272

Each loaded flat boat pays a duty of $6; boats or barges seventy feet or more in length, $10; and boats or barges less than seventy feet, and keel boats or rafts, $3.

Besides the above, a great number of barges, keels, flat boats with cattle, &c., and rafts of timber and lumber, stop in the upper suburbs, beyond the limits of the city jurisdiction, where they pay no levée duty. Cattle boats are not allowed to land within the bounds of the city. It is worthy of remark, that the barges, keel and flat boats, diminish in the ratio that the steam boats increase.

STATEMENT of the principal articles of domestic production which arrived at New Orleans in one year, ending October 1st, 1817; together with some articles marked thus*, brought the latter end of 1821, and the first part of 1822, as published in the Commercial Report, edited by Mr. T. W. Lorrain.

Apples,	barrels	5,000
Bacon and Hams,	cwt.	18,000
Bagging (cotton),	pieces	2,500
Bark, quercitron,	hhds.	800
*Beans,	barrels	308
*Beef, smoaked,	cwt.	1,501
Beef,	barrels	4,001
Beer and porter,	"	300
*Brooms,	dozen	259
*Buffalo robes,	packs	15
Butter,	kegs, etc.	1,800
Candles,	boxes	150
Cider,	barrels	500
Cotton,	bales	65,000
*Cotton,	"	126,216
Cordage,	coils	4,300
Corn,	bushels	140,000
Corn-meal,	barrels	4,000
*Deer-skins,		7,816
*Eggs,	barrels	45
*Flax-seed,	tierces	195
*Feathers,	bags	18
Flour,	barrels	190,000
Ginseng,	"	1,200
*Glass,	boxes	770
Hay,	tons	46
Hempen yarns,	reels	200
Hides,	sides	6,000
*Horns,		18,047
Lard,	bbls. & kegs	4,000
Lead,	cwt.	7,000
Lead shot,	do.	600
*Linseed Oil,	barrels	446
Molasses,	galls.	1,000,000
Oats,	barrels	4,000
Onions,	"	350
Paper,	reams	400
*Pecans,	barrels	595
*Patent balances,	sets	26
Peltries,	packs	3,550
Pitch,	barrels	3,000
Pork,	"	22,000
Potatoes,	bushels	5,000
Rice,	barrels	12,000
*Sausages,	kegs	259
Skins, bear.	pieces,	3,000
Soap,	boxes	2,500
Staves,	M.	125
Sugar,	hhds.	20,000
Taffia,	gallons	400,000
Tallow,	cwt.	200
Tar,	barrels	8,000
Tobacco,	hhds.	28,000
"	carrots,	10,000
"	manf'd cwt.	1,504
*Venison hams,		2,400
Wax, bees,	cwt.	300
Wheat,	bushels	95,000
Whisky,	gallons	250,000

The circumstance, however, that renders the political and moral picture of this country peculiarly distinctive, is, that almost the total of the production of the industry of its inhabitants, must flow to one common center. New Orleans alone will be forever, as it is now, the mighty mart of the merchandise and produce brought from more than a thousand rivers. Unless prevented by some great accident in human affairs, this rapidly increasing city will, in no very distant time, leave the emporia of the Eastern world far behind. With Boston, New York, Philadelphia and Baltimore on the left, Mexico on the right, Havanna in front, and the immense valley of the Mississippi in the rear; no such position for the accumulation and perpetuity of wealth and power ever existed.

During the Spanish government, Baron Carondelet,* commenced a work from the head waters of the Bayou or river (if we may so term it) St. John, in nearly a direct line with Orleans street, the center street of the city, for the express purpose of draining the city. After digging a ditch about two miles in length, he then stopped and commenced what is now the Basin, which was a large shallow pond intended as a reservoir. To carry on this work, the citizens were generally taxed, and those who owned slaves obligated to give their labor a part of each week.

'About two years after this country fell into the possession of the United States, some of our enterprising and wealthy citizens foresaw that in time this canal must become of considerable importance and suggested the idea of opening it. Consequently a subscription was opened and filled, and on the 3d July, 1815, the legislative council and governor of the Territory granted them a charter, under the restriction that there must at all tides, never be less than three feet water, and when they derived fifty per cent. on their expenditures, then the whole was to be given for the benefit of the public good. This charter was recognized and acknowledged by the General Government, who made some small donations of spots of ground to enable them to carry their intentions into effect, and erected a small and convenient light-house at the entrance of the Bayou, to facilitate the object. The company undertook the arduous and expensive task, and after several years labor, they opened the Bayou and removed the sand bars, stumps, and all other obstructions so as to admit vessels of considerable draught, as far as the village of Bayou St. John. When this was completed they levied a tax of sixty-two and a half cents per ton, on all vessels, with the following exceptions, viz: all armed vessels of the United States and foreign powers, fishing smacks, and all vessels bringing articles for the exclusive use of the city, such as sand to pave the city, etc. On all vessels used as lighters to those drawing too much water for the navigation, and all those bringing firewood, or carrying the mail, only half dues were demanded. During this period there were several contracts made for the purpose of opening the navigation to the city, and for making a Basin for the reception and convenience of the trade; but the local situation of the country caused the contractors to repent their bargains: they failed in their calculations, which finally determined them to abandon the work altogether. But this did not dishearten the few stockholders who still persisted in carrying on this laudable improvement; although a large number withdrew, others gave up all as lost, and in several instances, what they had paid in, actually made a present of to those who would receive it, considering the stock good for nothing.

In May, 1817, Mr. De la Croix, the last undertaker, announced to the company the completion of the canal and basin, and that the navigation was open; they consequently gave notice to the owners and masters of vessels, who were much rejoiced and delighted in consequence of the saving it would be to them: for, exclusive of the hazard and damage then sustained by land transportation of dry goods, crockery and every article subject to injure by jolting, the road was frequently so bad as to be almost impassable, and at such times it was considered a great favor to get hauling done even at the extravagant price of one dollar per barrel. The company then increased the toll to one dollar twenty-five cents per ton, to remunerate them for their expenditures. After contending with almost insupportable difficulties, during ten or twelve years, they have succeeded in their grand design, have expended upward of $300,000, and given us a fine convenient harbor, where we find a rich commerce, increasing annually at least twenty per cent.; and where there was formerly a filthy ditch and noisy frog-pond, we find a beautiful canal, with a good road and walks on each side, with gutters to drain off the water, and a large and secure basin where vessels can lie in perfect safety at all seasons: vessels make three and four trips where formerly they made but one, and with less expense, having no lighters to pay. There is an excellent road, nearly completed, from the village to the Fort St. John, thereby giving every facility to the commerce, as the vessels can be propelled by manual or animal strength in adverse winds or tides, and at the town of Bayou St. John is erected a convenient horizontal draw-bridge, for the use and convenience of the inhabitants residing on the other side.

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* From whom it takes its name.

The company is now engaged in deepening the navigation, so as to admit vessels of a larger class, by means of a mud machine, which they have got into operation at considerable expense, for which they deserve a great deal of credit, and at the same time to be amply remunerated.

The Basin Carondelet is situated about the center of the city, Toulouse street leading immediately to its center. The canal is two English miles in length, from twenty-five to thirty feet in breadth, having three half moons for the convenience of vessels passing each other, and from three and a half to six and a half feet in depth, being never less and often more, according to the tides, which are altogether governed by the wind. It is four and a half or five miles from the canal, down the river or Bayou St. John, to its confluence with Lake Ponchartrain, where the water is dammed in, three quarters of a mile from the lake shore, by an expensive work of large timber, forming a channel of forty or fifty feet in breadth: at the end of this work is situated the light-house above mentioned, which renders the navigation more certain. From this point the vessels commence their voyages to the different parts of the world. We frequently see in the basin from seventy to eighty sail, of from five-hundred and fifty to six hundred barrels, from the West Indies, the northern States, Pensacola, Mobile, Covington and Madisonville, and we anticipate, from the great increase in population of the Floridas, to see this trade double if not treble its present tonnage. This being a port of delivery, is superintended by a surveyor, and two temporary inspectors, to see that the revenue laws of the United States are properly maintained and respected.

By this canal is brought, cotton, tobacco, lumber, wood, lime, brick, tar, pitch, bark, sand, oysters, marketing and a great variety of other articles. A great number of Indians come up by this route to New Orleans with their furs and peltries, which they trade for such necessaries as they stand in need of.

The Marigny Canal commences in Champs Elysées street, near the river, and runs to the Bayou St. John, a distance of three and two-thirds miles, and when properly finished, will be fifty feet wide half way, and thirty feet the remainder. If this canal was completed and a basin dug on the spot formerly occupied by Fort St. Charles, the lower part of the town would be much improved.

The Charity Hospital is situated in Canal street, and consists of two large white buildings, having a number of convenient apartments, which are kept remarkably clean. The lot on which these buildings stand, embraces the whole square between Canal and Common and Baronne and St. Philip streets. About 1,300 males and females were admitted during the year 1821, and 130 persons have been in at one time. Sick persons, wishing admission, must apply to the mayor of the city or any one of the administrators. There are besides the above, the Marine and Naval Hospitals, and a private Hospital.

The spacious streets which bound the city, *i. e.*, Canal, Rampart, and Esplanade streets and the Levée, have lately been planted with four rows of the Sycamore or butter-wood tree, which in the course of a few years will afford a fine shade, contribute to the health of the city, and present one of the most elegant promenades in the United States. There are several large public squares, one of which, ***The Place of Arms***, three-hundred and fifty feet on Levée by three-hundred and thirty in depth to Chartres street, is very handsome, being planted with trees, and inclosed with an iron palisade, having beautifully ornamented gateways of the same metal. The ***Circus Public Square***, is planted with trees and inclosed, and is very noted on account of its being the place where the Congo and other negroes ***dance, carouse and debauch on the Sabbath***, to the great injury of the morals of the rising generation: it is a foolish custom that elicits the ridicule of most respectable persons who visit the city; but if it is not considered good policy to abolish the practice entirely, surely they could be ordered to assemble at some place more distant from the houses, by which means the evil would be measurably remedied. It is contemplated to open Esplanade street, from Rampart street to the Bayou St John, which will be a very handsome and convenient improvement.

The wells are generally from five to fifteen feet in depth, the water in them is clear, free from salt, but unpleasant to the taste, and unfit for drinking or washing of clothes. Drinking water, and that used for cooking and the washing of clothes, is taken from the river, carried through the city for sale, in hogsheads on carts, and sold at the rate of four buckets for six and one-fourth cents or fifty cents per hogshead. The water for drinking is either filtered through a porous stone or is placed in a large jar, and cleared by alum, &c. The water is considered wholesome.

New-Orleans, destined, from its topography, its mildness of climate, fertility of soil, and inevitable connection with sundry States in the rear, to become the great emporium of the Western World, is surely deserving of every aid in developing her natural resources. The immense revenue accruing to the United States from the commmerce of New-Orleans, lays the General Government under great obligations to protect it. It is the most exposed and important section of the Union. The most important fortifications for the defense of the country have been commenced, which, when completed, will render us secure from foreign invasion.

The population was much increased by the unfortunate French emigrants from St. Domingo, and afterward, in 1809, by those who were compelled to flee from the island of Cuba, to the number of about 10,000. The population is much mixed, consisting of foreign and native French; Americans born in the State and from every State of the Union; a few Spaniards, and foreigners from almost every nation: consequently the society is much diversified, and there is no *general* fixed character. There is a great "*confusion of tongues*," and on the Levée, during a busy day, can be seen people of every grade, color and condition: in short it is a world in miniature.

Much distortation of opinion has existed, and is not yet eradicated in the other parts of the United States, respecting public manners and morals in New Orleans. Divested of pre-conceived ideas on the subject, an observing man will find little to condemn in New-Orleans, more than other commercial cities; and will find that noble distinction of all active communities—acuteness of conception, urbanity of manners, and polished exterior. There are few places where human life can be enjoyed with more pleasure, or employed to more pecuniary profit.

It is intended to build a spacious State-prison or Penitentiary, just below the town, in the neighbourhood of Olivier's rum-distillery, and facing the river: toward the completion of this necessary building, the Legislature have voted $250,000. A large powder magazine is on the other side of the river, opposite the city.

COMMERCE OF NEW ORLEANS, 1849—YEAR ENDING 31ST AUGUST.

Agreeably with our annual custom, we present to the readers of the Review, for preservation, the statistics of New Orleans trade. The previous volumes of the Review will be advantageously consulted upon the same general subject.

Receipts from Interior, 1845-1849.

	ARTICLES.	1848-9.	1847-8.	1846-7.
	Apples, ... bbls	54987	39518	39612
	Bacon, asst.,.casks, &c.	32056	45119	36932
	Bacon,....bbls & boxes	32156	.....	......
	Bacon Hams, ...hhds	19831	18539	14518
	Bacon in bulk.......lbs	217000	381140	425163
	Bagging, ...pieces	72941	77682	60922
	Bale Rope, ...coils	93322	74325	56201
	Beans, ...bbls	13157	20485	24536
	Butter,.............kegs	57972	45213	51384
	Butter, ...bbls	2144	1156	872
	Beeswax, ...bbls	481	698	1109
	Beef,..bbls. and tierces	80590	50260	53968
	Beef, dried,........lbs	20300	56100	49000
	Buffalo Robes, .. packs	23	14	55
COTTON.	La and Mi...bales	811205	883144	453842
	Lake, ... bales	15781	13734	4356
	N. Ala. & Ten. do	217078	227561	211502
	Arkansas......do	46733	64294	35279
	Mobile ....do	35164	10857	16379
	Florida.........do	5065	4208	16966
	Texas ....do	11356	10007	2345

Value Receipts 1848-9.

ARTICLES.	Average.	VALUE. Dollars.
Apples,.........bbls	$3 00	174961
Bacon, ...	40 00	1282240
Bacon, ... boxes	25 00	803900
Bacon—Hams, ...	45 00	892395
Bacon, in bulk, ...	5	10850
Bagging, ...pieces	16 00	1167056 ✓
Bale Rope, ...coils	12 00	1119864 ✓
Beans, ...bbls	3 00	39471
Butter,..............	5 00	89860
Butter, ...bbls	20 00	42880
Beeswax, ...bbls	40 00	19240
Beef, ...bbls	11 00	489203
Beef,.........tierces	15 50	559813
Beef, dried, ... lbs	7	1421
Buffalo Robes, p'cks	70 00	1610 ✓
Cotton, ... bales	27 00	30844314 ✗
Corn Meal, ...bbls	2 50	30242
Corn, ... bbls	45	133070
Corn, ...sacks	1 05	1790394
Cheese, ...boxes	3 00	162867
Candles,.......boxes	4 50	127629 ✓

Corn Meal,.........bbls	12097	47543	88159
Corn in ears, ...bbls	295711	509583	619756
Corn, shelled,.....sacks	1706312	1083465	2386510
Cheese, ...boxes	54287	52362	57429
Candles,.........boxes	28362	16750	8496
Cider, ...bbls	1189	344	477
Coal, western,.....bbls	315000	320000	356500
Dried Peaches,.....bbls	469	385	3009
Dried Apples, ...bbls	2495	1173	5761
Flaxseed, ...tierces	1188	4393	962
Flour,..............bbls	1013177	706958	1617675
Furs, ...boxes	12	91	75
Furs, ...bundles	188	390	253
Feathers, ...bags	3939	2594	3498
Hemp, ...bales	19856	21584	60238
Hides, ...	30570	47662	98342
Hay, ...bales	54941	61934	95231
Iron, pig,..........tons	413	701	1151
Lard,.............hhds	790	459	143
Lard, ...tierces & bbls	214362	216031	117077
Lard, ...kegs	275485	303661	275076
Lime, western,.....bbls	10410	14920	5994
Lead,..............pigs	508557	606966	650129
Lead, bar,.........kegs	919	787	1291
Lead, white,......kegs	7795	9803	11686
Molasses, ...bbls	155807	159460	91710
Oats,.......bbls & sacks	266559	467217	588337
Onions, ...bbls	6898	7960	7185
Oil, linseed, ...bbls	1409	2327	3637
Oil, castor,.........bbls	2628	1199	1439
Oil, lard,............bbls	8842	5401	2573
Pickles,.....kegs & bbls	639	505	648
Potatoes,............bbls	140116	151861	149888
Pork,.....tierces & bbls	550643	356480	308170
Pork,.............boxes	18279	....	....
Pork, ...hhds	18499	14901	9452
Pork, in bulk, ...lbs	10273680	13564430	8450700
Porter and Ale,.....bbls	1828	3498	1383
Packing Yarn,.....reels	2211	3333	2193
Skins, Deer, ... packs	1301	1361	1784
Shot, ... kegs	4377	5258	3992
Sugar, ...hhds	125592	128112	82011
Sugar, ...bbls	5879	....	....
Soap,.............boxes	6520	5580	4361
Shingles, ...	80000	60000	147000
Staves, ...	3800000	2000000	2000000
Tallow,.............bbls	10622	4357	6656
Tobacco, leaf, ...hhds	52355	55882	55588
Tobacco, chew, ..kegs	2313	6390	3930
Tobacco,..........bales	33	118	1001
Twine,.........bundles	2067	2264	1285
Whisky,............bbls	125029	135333	126553
Window Glass, ..boxes	575	4260	3805
Wheat,....bbls & sacks	238911	149181	833649

Cider,...........bbls	3 00	3567
Coal, ...bbls	50	157500
Apples & Peaches "	2 50	7400
Feathers,.......bags	25 00	98475
Flaxseed,.....tierces	9 00	10698
Flour, ...bbls	4 50	4559296
Furs,................	....	200000
Hemp,.........bales	22 00	436832
Hides,...............	1 25	38212
Hay,...........bales	3 00	162723
Iron, pig, ...tons	30 00	12390
Lard, ...hhds	60 00	47400
Lard,..... bbls & tcs	18 00	3858516
Lard, ...kegs	3 50	1064197
Leather, ...bundles	25 00	99400
Lime,............bbls	1 50	15601
Lead,............pigs	3 00	1525671
Lead, bar, ...	18 00	17082
Molasses, ...gallons	16	2288000
Oats, ...	80	213247
Onions,..........bbls	2 00	13796
Oil, linseed,.....bbls	25 00	35285
Oil, castor, ...bbls	60 00	157680
Oil, lard,.......bbls	24 00	212208
Potatoes,.......bbls	2 50	365290
Pork, ...bbls	9 50	5231108
Pork, ...boxes	20 00	365580
Pork,..........hhds	40 00	739960
Pork, in bulk, ..lbs	3½	285263
Porter and Ale, bbls	8 00	14704
Packing Yarn, reels	8 00	17688
Skins, Deer,..packs	25 00	32525
Skins, Bear,..packs	15 00	190
Shot............kegs	20 00	87540
Soap, ...boxes	3 00	19560
Staves,............M	40 00	152000
Sugar..........hhds	40 00	8800000
Spanish Moss, bales	6 00	11532
Tallow,.........bbls	21 00	223062
Tobacco, leaf, hhds	70 00	3103450
Tobacco, strips,hhds	$100	800000
Tobacco, kgs & bxs	15 00	34725
Tobacco,.......bales	3 50	115
Twine...............	15 00	31005
Vinegar, ...bbls	5 00	185
Whisky, ...bbls	7 00	875203
Window Glass, bxs	5 00	2875
Wheat, bbls & sacks	2 00	477822
Other articles.......	....	5000000
Total value—Dollars,.....		81989692
Total in 1847–48..		79779151
Total in 1846–47..		90033256
Total in 1845–46..		77193464

EXPORTS PROVISIONS, 1848–9, NEW ORLEANS (INCLUDING THOSE TO MOBILE).

PORTS.	Flour, bbls.	Pork, bbls.	Bacon, hhds.	Lard, kegs.	Beef, bbls.	Lead, pigs.	Whisky, bbls.	Corn, sacks.
New York,...........	174898	220487	29971	402149	9192	290949	8100	205263
Boston, ...	303563	129628	10249	347390	11709	147789	2111	62167
Philadelphia,.........	14837	21726	5125	39769	1068	44237	590	2654
Baltimore, ...	10	28645	4200	61762	1717	4044	2891	....
Charleston, ...	4086	1754	3502	5988	60	160	7065	900
Other coastwise ports,	62025	8661	10759	10737	2974	50	32634	46277
Cuba, ...	740	1682	870	131847	195	....	....	2596
Other foreign ports, ..	218211	53467	2526	250049	33143	2412	82	1147004
Total, ...	778370	466050	67202	1249691	60058	489641	53473	1466861

EXPORT COTTON (BALES)—NEW ORLEANS*—1839 TO 31ST AUGUST, 1849.

TO	1849.	1848.	1847.	1846.	1845.	1844.	1843.	1842.	1841.	1840.
Liverpool, ...	603455	619817	367810	521953	529675	488817	624681	393990	396010	459943
London, ...	305		48	159	2025	518	61	38	304	113
Glasgow & Greenock	27533	27996	10598	17893	36213	21265	35831	15574	20415	26608
Cowes, Falmouth, &c.	11237	6270	6102	8134	17975	14893	15939	10740	9188	13560
Cork, Belfast, &c., .	2488		810	14181		2182	2926	1108	4393	4540
Havre, ...	139910	123856	90103	146153	112995	107973	159658	161103	157277	206311
Bordeaux, ...	3424	3178	330	2315	2314	1418	2861	2247	2807	6581
Marseilles, ...	11313	8659	3323	6806	7857	7462	9982	16992	21933	21969
Nantz, Cette & Rouen		5275	1963	4254	1854	3127	8374	2930	1914	5609
Amsterdam, ...		1831		2019	1253	1360	6593	581		3688
Rotterdam & Ghent,	2659	304	595	53	2355	512	2173	2907		709
Bremen, ...	12137	8716	4369	3419	9211	2770	13303	6369	1706	1084
Antwerp, &c., ...	24338	14170	2912	7838	7196	8499	17693	5209	2264	7377
Hamburg, ...	5321	7091	7466	3585	9123	3156	13664	5678	2983	6846
Gottenburg, ...	7303	4887	4376	3877	1630	402	114	286	2793	2994
Spain and Gibraltar,	42823	32565	17705	1679	821		401	78	561	1508
Havanna, Mexico, &c.	16328	25468	9376	29800	62083	33151	21177	12818	19002	30594
Genoa, Trieste, &c.,	41614	45228	30542	52607	27201	19704	17662	10610	16801	25608
China, ...		1490			2353		4303			
Other foreign ports, .	9301	13057	6579	8050	2267	1208	1342	174	90	1044
New York, ...	67611	67578	55187	74757	52880	82344	48036	31215	55930	46354
Boston, ...	111584	143989	75546	111666	75357	72400	73891	54062	81626	54048
Providence, R. I., ..	360	1566	470	5783	78	211	674	1910	3132	1611
Philadelphia, ...	18486	16213	13582	13690	6784	6919	3253	2846	5721	6195
Baltimore, ...	4959	12328	7288	5507	3640	4698	3278	1703	4832	3045
Portsmouth, ...		5733	3491	2769	1053	4136		2658	9025	6099
Other coastwise ports	511	3132	1437	910	2423	3280	3000	3716	581	6080
Western States, ...	2300	1500	2500	5000	6000	2500	2000	1722		
Total, ...	1167303	1201897	724508	1054857	984616	895375	1088870	749267	821288	949320

RECAPITULATION.

	1849.	1848.	1847.	1846.	1845.	1844.	1843.	1842.	1841.	1840.
Great Britain, ...	645018	654063	385368	562320	585888	527675	679438	421450	430310	504766
France, ...	154647	140968	95719	159528	125020	119930	180875	183272	183931	240498
North of Europe, ...	61062	50036	26297	28841	33035	17917	50382	21207	9836	23742
S. of Europe & China	100765	104751	57623	84086	92458	52855	43543	23506	36364	57754
Coastwise, ...	205811	252039	159501	220082	148215	176958	134132	99332	160347	122566
Total.	1167303	1201897	724508	1054857	984616	895375	1088870	749267	821288	949320

EXPORTS SUGAR AND MOLASSES, NEW ORLEANS (UP RIVER EXCEPTED).

Whither Exported.	1848–49.				1847–48.			
	Sugar.		*Molasses.*		*Sugar.*		*Molasses.*	
	hhds.	bbls.	hhds.	bbls.	hhds.	bbls.	hhds.	bbls.
New York, ...	44333	1532	1837	38892	36053	2600	5747	31225
Philadelphia, ...	18749	2232	410	14252	19808	1512	117	10871
Charleston, S. C., ...	3726	365	....	6659	3355	539	....	6660
Savannah, ...	1661	20	....	1096	806	....	118	2334
Providence & Bristol, R. I. .	....	....	....	230	....	....	1043	602
Boston, ...	2420	964	76	2054	3674	869	1177	5067
Baltimore, ...	10652	2991	77	9448	11149	3258	1522	12002
Norfolk, ... Richmond & Petersb'g, Va.	6289	1204	....	7139	6888	861	....	7121
Alexandria, D. C., ...	528	....	....	748	230	....	....	112
Mobile, ...	4549	1463	....	9120	5310	1604	....	9645
Apalachicola & Pensacola, . .	1363	294	....	3601	1738	426	....	3984
Other ports, ...	220	316	250	532	171	273	2142	1015
Total, ...	94490	11381	2650	93771	89182	11942	11866	90638

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* Since making up our statement of the stock of cotton on the 18th ultimo, we have discovered some omissions which require a further addition to our receipts, and also to our exports. We find that in the month of June a number of parcels were shipped to Mobile (in all, 1693 bales) to load a ship there for Havre, and that of this quantity only three hundred bales were cleared at our Custom House, or appeared in our exports. We also find that about two thousand three hundred bales have been taken from the market, during the season, for Western manufactories, of which no note had been taken. These items require an addition to our receipts, of three thousand six hundred and ninety-three bales. We also add one thousand six hundred and ninety-three bales to our exports to Havre.

EXPORT TOBACCO (HHDS.)—1838–1849.—NEW ORLEANS.

TO	1849.	1848.	1847.	1846.	1845.	1844.	1843.	1842.	1841.	1840.
Liverpool,........	6120	8706	3374	8976	4947	8808	6788	6930	5252	3827
London, ...	5362	10008	5173	12888	6475	8291	9851	7212	8732	4320
Glasgow & Green'k	....	....	....	....	....	....	....	....	....	....
Cowes, Fal'th, &c.	2535	1153	1148	2641	1131	5424	10798	6827	6681	992
Cork, Belfast, &c.	....	....	....	....	....	....	....	....	....	....
Havre,...........	6998	2201	1159	2215	3514	4846	4648	4037	4224	3655
Bordeaux,........	1450	128	242	1067	1565	1156	2332	1004	814	1107
Marseilles, ...	2192	2625	2096	1006	3934	5102	4665	1933	1774	1844
Nantz, Cette, Rouen	....	....	....	....	....	....	....	....	....	....
Amsterdam,......	....	....	....	451	50	3775	2700	1138	....	....
Rotterdam, Ghent,	....	75	568	1104	1014	917	2933	1882	....	....
Bremen, ...	4841	5252	4446	6328	12012	9602	7888	8997	4012	2464
Antwerp, &c., ...	1077	3371	1652	4294	3862	2178	5657	3690	1219	1090
Hamburg,........	80	239	403	181	786	2303	1477	3401	1064	1465
Gottenburg, ...	1041	945	949	943	909	734	963	946	1559	745
Spain & Gibraltar,	5620	7692	11795	9843	6749	10681	4496	7204	4142	3843
Hav., Mexico, &c.,	....	617	....	....	903	1601	1063	981	1020	1013
Genoa, Trieste, &c.	3845	3388	5046	2375	3001	1556	1760	550	2	44
China,..........	....	....	....	....	....	....	....	....	....	....
Other for'gn ports,	882	975	1008	298	794	1177	217	516	667	343
New York,.......	7318	9573	5458	4848	6936	6960	10533	7090	7466	8132
Boston,..........	1089	1619	2664	913	4938	2585	3650	2351	3109	2888
Providence, R. I.,.	....	....	....	....	....	....	....	....	....	....
Philadelphia,....	1426	1369	2779	1030	2536	1286	2845	936	2126	1963
Baltimore, ...	885	200	301	427	478	1167	2433	208	517	219
Portsmouth,.....	....	....	....	....	....	....	....	....	....	....
Other c'stwise p'ts,	135	228	115	217	2145	1100	2194	225	287	482
Western States, ..	....	....	....	....	....	....	....	....	....	....
Total, ...	52896	60364	50376	62045	68679	81249	89891	68058	54667	40436

RECAPITULATION.

Great Britain,....	14017	19867	9695	24505	12553	22523	27437	20969	20665	9139
France,..........	10640	4954	3497	4288	9013	11104	11645	6974	6812	6606
North of Europe,.	7039	10475	8018	13301	19051	20175	21618	20252	8040	6005
S. Eur'e & China,.	10347	12079	17849	12516	11029	14349	7536	9053	5645	5002
Coastwise, ...	10853	12989	11317	7435	17033	13098	21655	10810	13505	13684
Total, ...	52896	60364	50376	62045	68679	81249	89891	68058	54667	40436

ARRIVALS VESSELS AT NEW ORLEANS.

	1848–49.							1847–48.						
MONTHS.	Ships...	Barks...	Brigs....	Schrs...	St. Ships	Total.—	S. Boats.	Ships...	Barks...	Brigs...	Schrs...	St. Ships	Total.—	S. Boats
September,.......	27	9	11	32	7	86	164	17	13	15	41	6	92	184
October,.........	45	23	24	33	13	138	215	43	27	18	44	12	144	288
November,.......	96	47	44	37	14	238	288	146	45	31	62	15	299	266
December,.......	87	57	60	45	10	259	381	99	61	66	72	14	312	311
January, ...	71	62	47	50	11	241	325	102	82	74	97	18	373	349
February,........	101	62	39	39	10	251	313	97	60	59	74	16	306	316
March, ...	70	61	53	54	15	253	321	97	50	47	82	17	293	327
April,...........	132	56	34	53	11	286	257	72	42	40	68	11	233	250
May,............	74	32	19	43	15	183	191	90	42	35	96	22	285	229
June, ...	40	22	25	31	8	126	153	88	39	33	49	20	229	171
July,............	12	19	10	21	12	74	135	68	34	24	59	26	211	152
August, ...	2	12	9	18	10	51	130	36	14	20	51	29	150	134
Total,......	757	462	375	456	136	2186	2873	955	509	462	795	206	2927	2977

Comparative statement of the Receipts, Exports and Stocks of Cotton, at the following places, at the dates annexed:

RECEIPTS COTTON AT COMMERCIAL PORTS, 1848, 1849.

PORTS.	Stocks, Sept. 1. 1848.	Received since. 1848.	Exported from Sept. 1, 1848, to dates. To Great Britain.	To France.	To other fo'gn ports.	Total foreign ports.	U. S. North'n ports.	Stocks on hand and on shipb'rd 1849.
N. Orleans, Aug. 31	37401	1090797	645018	154647	161827	961492	205811	15480
Mobile,.... Aug. 24	23584	514595	290836	61597	44525	396958	105829	2066
Savannah, . Aug. 21	10050	399027	193793	18458	3764	216015	166294	9328
Charleston, Aug. 23	14085	445415	205054	48768	43905	297727	161675	17518
Florida, ... Aug. 10	507	197180	59196	5721	14904	79821	112113	800
Va. & N. Car. Aug. 11	569	22673	350	....	1056	1406	10770	550
Texas, ... Aug. 25	747	38827	....	750	1745	2495	25271	452
New York, Aug. 21	41967	.....	130431	76957	48572	255960	.....	65537
Other ports, Aug. 18	16030	.....	5360	173	3383	8916	.....	.....
Total bales,......	144940	2708514	1530038	367071	323681	2220790	787763	111731
Total to dates 1848	197704	2325108	1309885	276340	255486	1841711	680365	146908
Increase this year,	.....	383406	220153	90731	68195	379079	107398	.....
Decrease,........	52764	.....	.....	.....	.....	.....	.....	35177

RECEIPTS COTTON AT COMMERCIAL PORTS, 1847, 1848.

PORTS.	Stocks, Sept. 1. 1847.	Received since. 1847.	Exported from Sept., 1847, to dates in 1848. To Great Britain.	To France.	To other fo'gn ports.	Total foreign ports.	U. S. North'n ports.	Stocks on hand and on shipboard. 1848.
N. Orleans, Aug. 31	23493	1188733	654083	140968	154807	949858	252039	37401
Mobile,.... Aug. 24	24172	436930	224673	61212	29070	314955	107938	28062
Savannah, . Aug. 21	7787	241065	119897	5177	1411	126485	93946	9450
Charleston, Aug. 23	29655	260223	153090	29579	16177	198846	97835	11602
Florida, ... Aug. 10	2108	150817	40338	.....	7674	48012	98360	2345
Va. & N. Cor. Aug. 11	548	7598	68	.....	364	432	1958	700
Texas, ... Aug. 25	32	39742	.....	.....	772	772	28289	747
New York,. Aug. 21	83259	.....	110316	37992	42565	190873	.....	56601
Other ports, Aug. 18	26650	.....	7420	1412	2646	11478	.....	.....
Total bales,.......	197704	2325108	1309885	276340	255486	1841711	680365	146908

We have taken from New Orleans the amounts received from Mobile, Florida and Texas. Also, from Charleston the receipts from Savannah—and Mobile the receipts from Florida. The exports from Georgetown to New York are added to the Charleston receipts, and the exports from Darien to Liverpool and New York are added to the Savannah receipts. The exports from Mobile and Florida to New Orleans, and those from Savannah to Charleston, have been deducted from exports to Northern Ports.

Comparative arrivals, exports and stocks of Cotton and Tobacco at New Orleans, for ten years, from 1st September each year to date:

Years.	*Cotton—bales.* Arrivals.	Exports.	Stocks.	*Tobacco—hogsheads.* Arrivals.	Exports.	Stocks.
1848 '49	1142382	1167303	15480	52335	52896	13293
1847 '48	1213805	1201897	37401	55882	60364	14854
1846 '47	740669	724508	23493	55588	50376	22336
1845 '46	1053633	1054857	6332	72896	62045	17924
1844 '45	979238	984616	7556	71493	68679	7673
1843 '44	910854	895375	12934	82435	81249	4859
1842 '43	1089642	1088870	4700	92509	89891	4873
1841 '42	740155	749267	4428	67555	68058	2255
1840 '41	822870	821228	14490	53170	54667	2758
1839 '40	954445	949320	17867	43027	40436	4409

Comparative rates of exchange on London, Paris and New York. On the 1st of each month for three years past (60 day bills):

	1848-9.			1847-8.			1846-7.		
	London.	Paris.	N. York.	London.	Paris.	N. York.	London.	Paris.	N. York.
	pm.	℘ $	dis.	pm.	℘ $	dis.	pm.	℘ $	dis.
Sept	8½	5 20	1½	5¾	5 35	1⅜	8	5 31	1½
Oct.	8	5 22	1½	6¼	5 40	2¾	8¾	5 32	1⅜
Nov	7¼	5 27	1½	5	5 45	3¼	7	5 41	1⅞
Dec.	9	5 27	1½	5	5 45	2¾	5½	5 48	1⅝
Jan.	8	5 27	1⅜	8	5 32	2½	4¾	5 50	2
Feb.	7½	5 32	1¾	8½	5 32	2½	5	5 45	2⅛
Mar	5½	5 35	1⅜	7¾	5 35	2½	3	5 50	2⅞
April	4¾	5 37	1⅜	7¾		2	2	5 55	2¾
May	6½	5 35	1⅜	4		2¾	5	5 45	1⅝
June	7¾	5 30	1	6½		2¾	4½	5 40	2¾
July	8¾	5 25	¾	7½	5 20	1¾	5	5 36	2
Aug	8¾	5 27	¾	8½	5 17	1	4½	5 38	1⅞

Comparative prices of middling to fair Cotton at New Orleans, on the first of each month during a period of five years—together with the total receipts at New Orleans, and the total crops of the United States:

	1848-49.	1847-48.	1846-47.	1845-46.	1844-45.
	Cents.	Cents.	Cents.	Cents.	Cents.
September	5½ a	10⅝ a 12	7½ a 9	7¼ a 8⅜	6 a 7⅛
October	5¾ a 7	10 a 11	8¾ a 10	6⅞ a 8⅜	5¾ a 7⅛
November	5 a 6	7⅛ a 8⅛	9 a 10½	7 a 8	5⅛ a 6⅞
December	5⅛ a 6¼	6½ a 7¾	9 a 10¼	6½ a 7⅝	4¾ a 6¼
January	5⅜ a 6½	6½ a 7¾	10 a 11¼	6½ a 7⅞	4⅜ a 6¼
February	6⅛ a 7½	6⅝ a 8	11½ a 13	7⅜ a 7¾	4¾ a 6½
March	6⅛ a 7½	6½ a 7⅞	9½ a 11	6½ a 8¼	5 a 6½
April	6⅛ a 7½	6¼ a 7⅝	10⅝ a 11⅜	6⅝ a 8⅜	5¾ a 7⅛
May	6¼ a 7¾	5 a 6½	10⅝ a 12¼	6½ a 8½	5¾ a 7¼
June	7 a 8¾	5½ a 7¼	9⅞ a 11¾	6½ a 8	5⅞ a 7¼
July	7 a 8¾	5½ a 7¼	9¼ a 10¾	6½ a 8	6⅛ a 7½
August	9 a	5⅝ a 7½	10½ a 12	7 a 8½	6¼ a 7¾
	Bales.	Bales.	Bales.	Bales.	Bales.
Rec'ts N. O.	910,000	1,188,733	707,324	1,053,633	979,238
Crop of U. S.	2,030,409	2,350,000	1,800,000	2,100,537	2,400,000

Comparative prices of Sugar on the Levée, on the first of each month for five years:

	1848-9.	1847-8.	1846-7.	1845-6.	1844-5.
	Cents.	Cents.	Cents.	Cents.	Cents.
September	2½ a 4½	5 a 7¾	4½ a 7¼	6 a 6¼	5 a 6¾
October	2½ a 4¾	5 a 7½	6¼ a 9	6 a 7½	5 a 6¾
November	3 a 4½	3 a 5½	5½ a 7	5 a 7	4 a 5¾
December	2½ a 4½	2½ a 5	4½ a 7	4 a 6½	3 a 5¾
January	2½ a 4½	2 a 5	5 a 7⅛	4¼ a 6½	2¾ a 5¼
February	2¾ a 5	2½ a 5¼	5 a 7⅛	4 a 6⅛	2¾ a 5¼
March	2¾ a 5¼	2¼ a 5	5¼ a 7½	4 a 6¼	3 a 5½
April	2¾ a 5¼	2¼ a 5	5¾ a 7½	4 a 6¼	5 a 6¾
May	2¾ a 5¼	1¾ a 4¾	5 a 7½	4⅛ a 6¼	5 a 6¾
June	2¾ a 5	1½ a 4½	5 a 7½	4 a 6¼	4½ a 6½
July	2¾ a 4¾	2½ a 4¾	5 a 7¾	4 a 6⅝	4½ a 6½
August	3 a 5½	2¾ a 4¼	5¼ a 8	4⅛ a 7¼	5⅛ a 7

Comparative prices of Molasses on the Levée, on the first of each month, for five years.

	1848-9.	1847-8.	1846-7.	1845-6.	1844-5.
	Cents.	Cents.	Cents.	Cents.	Cents.
Sept.	15 a 20	28 a 32	15 a 22	24 a 27	26 a 28
Oct.	17 a 21	28 a 32	20 a 25	21 a 24	24 a 26
Nov.	23½ a 24	22½ a 23	26 a 26½	21 a 22	20 a 21
Dec.	19½ a 20	19¼ a 19½	23 a 23½	21 a	20½ a 20¾
Jan.	18 a 91½	17 a 17¼	24½ a 25	21 a 21½	16½ a 17⅛
Feb	20 a 21¼	17 a 19	27 a	21 a 21½	14½ a 16
March	15 a 19	15 a 21	29 a 29¼	22½ a 23	20½ a 21
April	15 a 19	15 a 21	25 a 29	25 a 25½	25 a 26
May	12½ a 18	12 a 16	26 a 30	23 a 23½	24 a 27
June	12 a 18½	15 a 20	26 a 30	18 a 22	18 a 27
July	8 a 18	15 a 20	26 a 30	15 a 20	20 a 27
August	10 a 20	15 a 20	28 a 31	15 a 21	26 a 28

Comparative prices of flour, on the first of each month, for five years:

	1848-9.	1847-8.	1846-7.	1845-6.	1844-5.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
September	4 a 4¾	4¾ a 6	3½ a 4	3½ a 4½	a 6
October	5 a 5¼	4 a 5	4 a 4⅝	3⅝ a 4¼	3⅞ a 4⅜
November	4¾ a 5⅛	5¼ a 5⅝	5 a 5½	4½ a 5¼	4 a 4¼
December	4⅝ a 5	5⅛ a 6	4⅞ a 5⅜	7½ a 8½	4 a 4⅜
January	4¼ a 4¾	5½ a 6	4⅜ a 5¼	5¾ a 7	4⅜ a 5¼
February	4⅛ a 5	4¾ a 5¼	6 a 6½	5 a 6¼	3¾ a 4½
March	4½ a 5¼	5 a 5¾	5½ a 6¼	4⅝ a 5¼	4 a 4¼
April	4⅛ a 5	5¼ a 5⅞	6 a 6¼	4⅛ a 5	3⅞ a 4⅝
May	3⅞ a 5	4¼ a 5¼	5¾ a 6½	4 a 4¾	3⅞ a 4½
June	4½ a 5¼	4¼ a 4¾	6¾ a 7½	3⅜ a 4½	3¾ a 4⅜
July	3⅞ a 5	4¼ a 5	6 a 7	3 a 4	3½ a 4⅜
August	6 a 7½	4 a 4⅝	4 a 5½	3¼ a 4	4 a 4¾

Comparative prices of Mess and Prime Pork, on the first of each month for two years:

	1848-9.		1847-8.	
	Mess.	Prime	Mess.	Prime.
	Dollars.	Dollars.	Dollars.	Dollars.
September	11¼ a 11½	9 a	15 a	12½ a 12¾
October	12¼ a	10¼ a	13½ a 13¾	12¼ a 12½
November	10¼ a 10½	9¾ a 10	12⅛ a 12½	11¼ a
December	10 a 10½	9 a 9½	10⅝ a 11	8⅝ a 9
January	11 a 11¼	9½ a 9⅝	9 a 9½	7 a 7¼
February	10¾ a 11¼	9⅞ a 10	9½ a 9¾	7 a 7½
March	10¾ a 10⅜	9 a 9¼	9 a 9¾	7 a 7¼
April	10 a 10⅛	9 a	8¾ a 9	6¾ a 7
May	9⅝ a 9⅞	8¾ a	8⅛ a 8⅜	6¾ a 7
June	9⅜ a 9½	8⅛ a 8¼	9½ a	7⅜ a 7½
July	10½ a 10¾	8½ a 8¾	10 a	7⅝ a 7¾
August	9¾ a 10¼	8⅛ a 8¼	10 a 10¾	7½ a 8

Comparative prices of Corn, in sacks, on the first of each month for five years:

	1848-9.	1847.8.	1846-7.	1845-6	1844-5.
	Cents.	Cents.	Cents,	Cents.	Cents.
September	52 a 57	50 a 55	36 a 40	40 a 42	43 a 44
October	48 a 53	50 a 75	60 a 65	35 a 38	40 a
November	52 a 58	41 a 50	58 a 75	45 a 50	43 a 45
December	42 a 51	45 a 50	60 a 70	80 a 82	34 a 37
January	35 a 40	54 a 60	55 a 67	55 a 63	37 a 38
February	34 a 43	40 a 55	80 a 90	40 a 50	38 a 40
March	30 a 41	36 a 42	75 a 90	47 a 52	40 a 41
April	20 a 40	30 a 38	80 a 95	42 a 50	35 a 36

May	30 *a* 45	22 *a* 28	55 *a* 70	40 *a* 50	35 *a* 38
June	50 *a* 55	32 *a* 36	65 *a* 80	35 *a* 40	28 *a* 32
July	50 *a* 53	33 *a* 39	65 *a* 75	25 *a* 32	30 *a* 34
August	50 *a* 56	36 *a* 42	40 *a* 50	30 *a* 35	34 *a* 36

Comparative rates of freight, on Cotton and Tobacco to Liverpool, Havre and New York, on the first of each month, for the past two years:

COTTON—PER POUND.

	1848-49.			1847-48.		
	Liverpool.	Havre.	N. York.	Liverpool.	Havre.	N. York.
Sept	5-16d	—	¼ct.	½d	c t.	½
Oct.	7-16	⅞	⅜	⅝	1¼	½
Nov.	15-32	⅞	½	⅝	1¼	⅝
Dec.	15-32	⅞	½	½	1	½
Jan.	15-32	⅞	½	7-16	1	⅜
Feb.	9-16	1	⅝	½	1	½
March	9-16	1⅛	⅝	15-32	15c16	½
April	⅝	1¼	¾	9-16	1	½
May	7-16	⅞	½	9-16		⅝
June	¼	⅝	¼	7-16		⅜
July	⅜	⅝	¼			⅜
August	⅜	¾	½	5-16		¼

TOBACCO—PER HOGSHEAD.

Sept.	25s		$2 00	40s 0d	$	$5 50
Oct.	37s 0d		4 25	40 0		4 75
Nov.			4 75	40 0		6 00
Dec.	38s 6d		5 25	40 0	9 50	4 75
Jan.	40s		6 25	40 0	9 50	4 00
Feb.			8 75	39 0	9 50	4 75
March		$11 00	8 50	40 0		5 25
April		11 00	9 75	40 0		5 25
May	40s		5 75	45 0		7 50
June	30s	8 00	2 00	36 0		4 75
July	30s	8 00	4 00	35 0	9 00	4 00
August	30s	8 00	4 00	30 0	7 00	2 00

Monthly arrivals of Flat boats, for the past season.

Months.	Ohio.	Ky.	Ia.	Va.	Penn.	Ill.	Mo.	Iowa	Ark.	Ala.	Tenn.	Miss.	Total.
Sept.	6	1	3										10
Oct.	5					1		1				1	8
Nov.	8	11	4				1	4					28
Dec.	80	38	58	3		2	4	3			3		191
Jan.	82	39	59	7	10	4	1	1	1		19	1	224
Feb.	55	11	92		18	17	1				5		199
March	37	9	90	2	10	15				9	12	8	192
April	16	7	108		25	15				10	3	20	204
May	3	6	18		6	4				12	11		60
June	4	4	3	1	19	1	2				8		42
July		12	2										14
August	2	10	10		2								24
Total	298	148	447	13	90	59	9	9	1	31	61	30	1196

Also about 300 from various States with cattle, sheep, hogs, lumber, &c.—making a total of 1496.

Imports of specie, for three years, from 1st September to 31st August:

1848-9	$2,501,250
1847-8	1,845,808
1846-7	6,680,050
1845-6	1,872,071

Foreign merchandize. Direct imports of Coffee, Sugar and Salt, for three years—from September 1st to August 31st:

		1848-9.	1847-8.	1846-7.
Coffee, Havanna	bags,	16341	8590	43931
Coffee, Rio	bags,	299129	239371	205111
Sugar, Havanna	boxes,	14775	12574	45869
Salt, Liverpool,	sacks,	508517	300943	344858
Salt, Turk's Island, &c.	bush.	249001	361184	194431

FOREIGN COMMERCE OF NEW ORLEANS.

Through the politeness of Messrs. Desforges and Kane, register clerks at the Custom House, we are enabled to lay before our readers the following valuable statistics in reference to the commerce of New Orleans:

EXPORTS—PRODUCE AND MANUFACTURE U. S.

	1st qr.	2d qr.	3d qr.	4th qr.
In Am. vessels to foreign countries	3,196,225	5,743,294	4,604,158	8,865,844
In foreign " " "	1,438,824	1,361,981	7,799,865	3,999,627
Coastwise,	3,636,658	5,274,164	13,807,966	5,664,965
	8,271,707	12,379,439	26,211,989	18,530,436

Total for year ending June 30, 1849, ...$65,392,571
The year previous, ... 67.182,323

TONNAGE ENTERED.

	No. vessels from foreign ports.				No. tons.			
					1st qr.	2d qr.	3d qr.	4th qr.
American,	121	182	189	205	39,840 88	51,391 05	66,204 70	73,387 79
Foreign,	27	73	151	93	8,475 29	72,140 21	74,468 07	46,112 53
Coastwise,	336	363	460	399	87,798 43	114,387 66	140,267 01	119,446 58
	474	628	800	697	136,114 65	237,918 92	280,939 78	238,946 84

Total to June 30, 1849, ...2,599 ....893,920 24
The year previous, ... —— 900,448 47

TONNAGE CLEARED.

	No. vessels for foreign ports.				No tons.			
					1st qr.	2d qr.	3d qr.	4th qr.
American,	128	184	171	234	48,208 45	78,797 13	62,790 39	104,831 03
Foreign,	41	74	103	102	19,000 78	22,990 17	101,100 24	51.933 47
Coastwise,	353	397	642	442	82,109 01	103,015 51	181,373 71	113,015 54
	522	655	916	778	149,318 35	204,802 81	345,264 39	269,780 09

Total to June 30, 1849, ...2,871 ....964,165 69
The year previous, ... —— 961,015 07

REMARKS OF THE BULLETIN UPON ANNUAL TABLES, DUTY OF NEW ORLEANS, ETC.

In reviewing these details, while we are struck with the steady increase of our city, both in its inland and foreign trade, we cannot admit that the improvement has been commensurate with its extraordinary natural advantages. Situated at the mouth of that mighty stream, which, in uniting by its numerous navigable tributaries remote States and various climates, presents a striking image of commerce itself, its site alone should give it a high rank as a commercial metropolis; but when we also regard its genial and delicious climate, its general salubrity, and the value of the peculiar agricultural products of the surrounding country, it seems pre-eminently fitted to be the true emporium of the South and West. It has nevertheless had to contend with powerful antagonists. The annually increasing capital of the North, concentrated in its great cities, and wielded for their particular benefit, has exercised even a stronger influence than our local superiority; and a considerable portion of the inland trade for which our city is the natural mart, whether for sale, deposit or transhipment, has passed by the Western Canals and Railroads to its Northern rivals. Our sagacious merchants are far from being blind to this subject. They see the full magnitude of the evil, and can well calculate how much of the great stream of commerce, which ought to find its only embouchure at their wharves, has been diverted by the inland routes to New York and Boston. But their capital, less in proportion to the extent of their business than that of any other mercantile community in America, is too limited for them to undertake, by individual action, objects which can only be effected by the united powers of the whole community. With a simultaneous and energetic effort at home and abroad, the busy scene that will soon be exhibited on the distant Isthmus of Panama, might be presented on the Tehauntepec route, in which the entire population of the West and South are so much more interested. Our neighboring city, with a degree of enterprise and public spirit well worthy of emulation, is energetically pushing forward her great Western Railroad, the completion of which must largely increase her business and resources and the value of every foot of ground within her boundaries. Shall we stand idly by without even exercising our legitimate influence to obtain from Congress the necessary appropriations for the improvement of the navigation of our great "inland sea?" This, at least should receive our earnest attention, even if we should make no immediate attempt to expedite communication with the North by the projected railroad from Pensacola to the South-western terminus of the Georgia lines, or by a Railway or a Ship Canal across the peninsula of Florida. Every inhabitant of our city, and particularly every owner of real estate within its limits, has a direct interest in such improvements. Our policy is clear. The greater our natural resources the more effectual should be our measures to develop them to their full extent. At the same time we should relieve Commerce of all unnecessary restrictions and increase its facilities by every means at our command. Pursuing this wise course, the business of New Orleans must increase with an accelerated progress, and our future Commercial Annals exhibit a far brighter page than we have here presented.

REVIEW PRINCIPAL STAPLES 1849.

COTTON.—This leading staple of our market, has, during the season just closed, escaped the violent fluctuations of the previous year, but some peculiarities have marked its progress, which will be found noticed in the following summary.

The season opened under great depression, from want of competition in the demand, and from an unusual degree of uncertainty in respect to the supply, the extreme estimates of the crop varying more than 500,000 bales. The unsettled state of Europe also continued to exercise an unfavorable influence, as it curtailed the operations of the British manufacturers, and caused prices to rule low, and the stocks to accumulate, in the great markets of England.

EXTENT OF CROP, ETC.—The total receipts at this port since first of September last, from *all sources*, are 1,142,382 bales. This amount includes 51,585 bales received from Mobile and Florida, and from Texas *by sea*. [That portion of the Texas crop which reaches us via Red River cannot be distinguished from the product of Louisiana.] Deducting from our total receipts the above amount received from Mobile, Florida and Texas, the remainder shows our *receipts proper* to be 1,090,797 bales, or a decrease of 97,936 bales as compared with last year. The total exports during the same period are 1,167,303 bales, of which 645,018 bales were shipped to Great Britain, 154,647 to France, 161,827 to the North and South of Europe, Mexico, etc., and 205,811 to United States ports, including 2,300 bales to Western States. Comparing the exports with those of last year we find an increase of 13,679 bales to France, and of 7,526 to the North and South of Europe, etc., while to Great Britain there is a decrease of 9,065 bales, and of 44,662 bales to United States ports. The total receipts *at all the Atlantic and Gulf ports*, up to the latest dates received—as shown by our General Cotton Table—are 2,708,514 bales, against 2,325,108 bales to same dates last year; showing an increase of 383,406 bales. This amount, however, it should be understood, does not represent *the actual crop of the United States*, as this cannot be made up until the full returns of receipts, exports, stocks, etc., are concentrated at one point. For a series of years the statement of the cotton crop has been made up by the *New York Shipping and Commercial List*, and should they retain the usual basis of their calculations, the *actual crop* will fall short of the *receipts at the ports*, as the stock at Augusta and Hamburg will be less than it was at the close of last year, and the difference between the two stocks will be deducted from the receipts, as belonging to the crop of last year. At all events the crop of 1848–9 cannot vary greatly from 2,700,000 bales.

It will be seen by the above summary that the largest crop ever produced in the United States has been disposed of, leaving on hand, to enter into the supply of the coming season, a lighter stock than has been known for years past, as the whole quantity in the Southern shipping ports is only 46,194 bales, and the amount held back in the interior is known to be unusually small. It is gratifying also to notice that, notwithstanding the very gloomy opening of the season, and the marked depression of prices, a gradual amendment has taken place with the progress of the year, and that a much higher range of prices was attained at the close, than the most sanguine could have anticipated, as it was apprehended that the supply, in view of the troubled state of Europe, would prove excessive, whereas the result shows a proportionately increased consumption both in Europe and our own country. The table of import, delivery, stock, etc., in the whole of Great Britain, for the six months ending on the 30th June last, stands as follows:

		1849.		1848.
Stock 1st January,..........bales		496,050		451,940
Import six months,..............		1,324,955		1,033,067
Making a supply of..............		1,821,005		1,485,007
Export six months,......	114 500		66,000	
Consumption,...........	851,205—	965,705	682,307—	748,307
Stock 30th June,................		855,300		736,700
Weekly average taken for consumption, ...		32,738		26,242

Thus the quantity taken for consumption in Great Britain, in the first six months of the current year, is found to exceed the amount taken for that purpose in the same period last year by 168,898 bales, and what is still more remarkable under all the circumstances, it exceeds by a few bales the weekly average of 1845, which was, perhaps, the most prosperous season ever known to the British manufacturer. This recovery of the maximum of consumption has also been attended by a material advance in prices, and the last quotation for middling cotton at Liverpool was 5⅜d., or 2d. above the lowest point of the season. the quantity taken on speculation at Liverpool alone, from January 1st to August 3d, 1849, was 365,340 bales, against only 50,250 bales during the same period the previous year. At Havre, the delivery for consumption, for the first six months of the current year, amounted to 193,971 bales; exceeding the quantity taken in the same time the year previous by 73,321 bales, or about forty per cent. In the United States the quantity taken for consumption cannot vary much from 650,000 bales, though the New York cotton statement will doubtless make it considerably less, as that does "not include any cotton manufactured in the States south and west of Virginia."

PROSPECTS FOR THE FUTURE.—Having thus traced the progress of our market during the past season, from its opening to its close, we now come to the point which claims of us some reference to the probable prospects for the coming year. The question of supply, in view of the increase of consumption, has again become of paramount importance, and is likely to challenge a closer scrutiny than for some years past. It is a question that is always involved in much uncertainty, particulaly at so early a period of the season as this, and the indulgence in anything like definite estimates would be presumptuous in the extreme, as so many vicissitudes may yet arise to the advantage or disadvantage of the growing crops. We think it may be safely asserted, however, that, what with the frosts of April, which by rendering replanting necessary to an important extent, retarded the progress of cultivation several weeks in some sections, and the excessive rains of July, which washed the hills, flooded the lowlands, and kept the grass and weeds rank in the fields—and still further, the recent destructive overflow on Red River—there can hardly be a doubt that the total product of the present season will fall short of the last by several hundred thousand bales. This conviction, with the greatly enhanced prices which peculiar circumstances caused to be realized at the close of the season, it is to be apprehended may give rise to rather extravagant expectations on the part of planters, which may perhaps be productive of disappointment, as it should be borne in mind that European affairs are still in a very unsettled state, and that any great enhancement of prices must inevitably check the ratio of consumption. Nevertheless, with the experience of the past year in view, and indulging in a reasonable estimate of future prospects, there seem to be strong grounds for the belief that the rates for the coming crop must attain a much higher average than was realized for the product of the past season. It may be noted as an encouraging feature, that the food crops of Great Britain and the Continent give favorable promise, and it is to be hoped that other elements will not be wanting to insure the realization of a prosperous trade.

The first bale of the present year's growth was received on the 7th of August, from the interior of this State; being only two days later at market than the first bale of the previous year; but it was not until the 19th of August that any further portion of the crop came to hand, and the total receipts of the *new crop*, up to this date, are 477 bales, being the smallest quantity for many years, except in the short crop year of 1846, when the receipts of new crop up to the 1st of September were only 140 bales. These remarkably light arrivals, in view of the comparatively high prices that are obtainable, may be considered as fully corroborating the general assertion that the crop is very backward, and this fact will doubtless have its influence with parties interested, in forming their estimates of the probable product. The quality of the new supplies thus far, this season, proves much superior to those of last year, and they give warrant for the expectation of a considerably higher average classification than was attained for the crop of 1848. The sales of new crop up to this date amount to 200 bales, at a range of 10½ to 12 cents for good middling to good fair, with some *fancy* parcels at 13 to 14 cents per pound.

In addition to the causes already enumerated, as operating against the production of a full crop, the past few days have brought intelligence that the boll worm is quite destructive in many sections, and that in several portions of Louisiana and Mississippi caterpillars have appeared upon the plants, which it is feared may prove the same species of worm that committed such ravages in 1846. It is devoutly to be hoped, however, that this may not be the case, or at least that the lateness of their appearance, and a favorable change in the weather (which has thus far been rather too wet) will prevent the accomplishment of very extensive injury. Some two or three weeks (perhaps less) will determine this important point.

Sugar.—In our last annual report we remarked that the prospects for a large yield were by no means as flattering as they were at the same date the year previous, and that in no event was the crop likely to reach the very large production of 1847, notwithstanding the material increase in the cane cultivation. The result has sustained the correctness of our impressions in this respect, as the total crop, according to popular estimate (which, in the absence of more authentic data, we are again compelled to adopt), is computed at 220,000 hogsheads; being a reduction as compared with last year of 20,000 hogsheads. Placing the crop at 220,000 hogsheads (as above stated) and adding 12,000 hogsheads for the estimated stock on hand 1st September last, would give a supply of 232,000 hogsheads, the distribution of which, as near as can be ascertained, has been as follows: shipments out of the State by sea, including those from Attakapas, equal to about 97,000 hogsheads; consumption of the city and neighborhood, furnished in small parcels, of which there is no record, 14,000 hogsheads; taken for refining in the city and State, 8,000 hogsheads; estimated stock now on hand in the State, 5,000 hogsheads; leaving as the quantity taken for the West 108,000 hhds. The shipments to the Atlantic ports amount to about 90,000 hogsheads; being an increase of 6,000 hogsheads, as compared with last year.

Prospects Sugar Crop.—We have been accustomed, before closing our remarks under this head, to make some reference to the growing crop, and to the prospects of supply, and we now propose devoting a brief space to that branch of our subject. It is generally known that the remarkable height attained by the waters of the Mississippi, during a lengthened period of the past season, caused extensive overflows along its banks, and, as a consequence, the entire destruction of many cane crops, and much damage to others, where the waters of the flooded swamps encroached upon the rear of the cultivated fields. The whole extent of the damage by overflows is at present mere conjecture, and so widely different are the estimates of various parties, that we shall not venture to state any amount in figures. Of the crops that escaped overflow, however, we are pleased to notice that the accounts are generally of an encouraging character, and that the prospects of a fair yield are more favorable than at the same date last year; so that, notwithstanding the damage by overflow, should the season continue favorable for maturing and grinding the cane, and no killing frost intervene at an early date, what with the rather better prospects of the cane up to this time, the new plantations which will present their first product, and the further extended cultivation, there seems a strong probability that the crop will be at least fully equal to that of last year in amount, while the quality is likely to maintain a higher average, as the cane is understood to be further advanced toward maturity. As we have heretofore remarked, however, this is too early a period of the season for any approach to an accurate estimate of the final result, so liable is the plant to be unfavorably affected by various contingencies that may possibly arise. The remarkable fluctuations to which the culture of the cane has heretofore been subjected, are shown by the following table, which presents the annual product of Louisiana for a series of years:

Crop of	1848,	220,000	hhds.	Crop of	1838,	70,000	hhds.
"	1847,	240,000	"	"	1837,	65,000	"
"	1846,	140,000	"	"	1836,	70,000	"
"	1845,	186,650	"	"	1835,	30,000	"
"	1844,	200,000	"	"	1834,	100,000	"
"	1843,	100,000	"	"	1833,	75,000	"
"	1842,	140,000	"	"	1832,	70,000	"
"	1841,	90,000	"	"	1829,	48,000	"
"	1840,	87,000	"	"	1828,	88,000	"
"	1839,	115,000	"				

The prospects of a market, to which we shall briefly allude, are of course somewhat involved in the extent of the crop; but there are other considerations and contingencies which may be for or against the interest of the planter. The stocks in the northern cities are known to be unusually large, and the crop of Cuba—which has come in competition with the Louisiana crop in the northern markets to a greater extent during the past season than usual—is said to promise a very abundant yield. These points are unfavorable to the planter, but we notice, as a counterbalance, the fact that the supply in the West is unusually moderate, and also the probability that a larger proportion of the crop of Cuba will be diverted to the European markets than was the case last year; so that, should the product of Louisiana not materially exceed that of last year, and the quality prove better, as seems now to be the prospect, it would appear probable that last year's rates will at least be maintained, and it may be that even a higher average will be eventually realized.

Tobacco.—The crop, although by no means equal in quality to that of the preceding year, was nevertheless a tolerably fair one in that regard, and certainly better than we had reason to expect, from the unfavorable season and the character of the early receipts. The total receipts at this port since 1st September last, are 52,335 hhds., and the best information we have been able to obtain, leads us to believe that the quantity remaining in the country is smaller than for many years past. Among the receipts are included 8,000 hhds. Strips, and the quantity of Leaf tobacco inspected at the State warehouses since 1st September, is 37,113 hhds. The exports of the past twelve months amount to 52,896 hhds., and their distribution among the foreign and coastwise ports, as well as a comparison of the receipts, exports and stocks, for the last ten years, will be shown by our tables.

On the subject of the growing crop, we cannot of course speak with much confidence at this early period. We may state, however, that the unusually cold weather, accompanied by severe frosts, which prevailed throughout the West in April, caused a great scarcity of plants in many sections, and that a continuance of heavy rains for many weeks, in June and July, has further interfered with the prospects of the planters, some of whom were compelled to gather their crops at a very early period, and in an unripe state, in order to save them from total loss. At a later period, when we shall doubtless be in possession of information upon which to base a more decided opinion, we may recur to this subject.

Western Produce.—The past season has witnessed a considerable increase in the receipts of most leading articles of western production, as compared with last year, and a glance at our tables will show a corresponding augmentation in our exports. The arrivals of *Flour* are 1,013,177 barrels, against 706,958 barrels last year; of *Indian Corn* equal to 4,785,000 bushels, against 3,600,000 bushels last year; of *Wheat* equal to 475,000 bushels, against 300,000 bushels last year; of *Corn Meal* the arrivals are much less, being only 12,097 barrels, against 47,543 barrels last year. The total exports of *Flour* amount to 778,370 barrels, against 472,519 barrels last year. Of this quantity 165,458 barrels have been shipped to great Britain and Ireland, 53,493 to the West Indies, &c., and the remainder to coastwise ports. Of *Indian Corn* the total exports are equal to 3,662,000 bushels, against 3,059,000 last year. Of this quantity 2,561,000 bushels have been shipped to Great Britain and Ireland, 313,000 to the West Indies, &c., and the remainder to coastwise ports. Of *Wheat* the exports to Great Brittain and Ireland have been equal to about 100,000 bushels, and of the remainder of the receipts a part was consumed by our city mills, but the bulk was shipped to the North. A table published by the New York Shipping and Commercial List, makes the comparative exports to Great Britain and Ireland, from all the ports of the United States; from September 1st to August 1st in the past two years, as follows;

		1847-8.	1848-9.
Flour	barrels	178,782	1,056,431
Corn Meal	barrels	102,318	81,344
Wheat	bushels	219,917	1,077,585
Corn	bushels	4,134,912	12,536,758

In regard to supplies for the coming season, we are sorry to observe that those of flour and wheat are not likely to be abundant. The accounts from the West respecting the wheat crops are unfavorable, and in the more southern States, such as Tennessee, Mississippi, Alabama, &c., where the crops were forward and flourishing, and the cultivation largely extended, the frosts of April caused almost total destruction. Of Indian corn, however, the great food crop of the country, it is gratifying to observe that there is a prospect of very ample supplies, though we notice that in the South recently there has been considerable complaint of damage from excessive rains. With the exception of lard, the receipts of which have fallen off somewhat, the trade in Provisions has been still more extensive than last year.

Hemp.—We remarked in our last annual report that our information from the interior, in regard to the growing crop, gave promise of but a meager supply for the use of the Atlantic markets, and the result has proven the correctness of our statements, the entire receipts since the first of September having been only 19,856 bales, or 1728 bales less than last year. The certainty of a short supply caused shippers from the interior to place high limits upon their shipments, and thus for several months no orders could be filled in this market, the rates claimed being so far above the views of buyers. Indeed, there have been scarcely any sales of much importance here during the entire season, nearly the whole of the receipts having been forwarded to the North on country account. The few lots sold have been at a range of $125 @ $150 per ton for dew-rotted, and were taken for the northern markets, there having been no demand for Europe, and not a bale exported during the season to a foreign port. The total exports from this port since 1st September have been 19,179 bales, all of which has gone coastwise, and nearly the whole to New York and Boston. The following table exhibits the comparative receipts and average prices for a series of years:

	Bales.	Per ton.
1842–43	14,873	$ 80 00
1843–44	38,062	66 00
1844–45	46,274	60 00
1845–46	30,980	60 00
1846–47	60,238	90 00
1847–48	21,584	115 00
1848–49	19,856	132 00

The accounts from the West respecting the growing crops are favorable, and there is likely to be an increase in the shipments to the Atlantic markets.

COFFEE.—The trade in this article continues to advance in importance, and our city has already attained to the position, at least as respects direct importations from Rio, of the leading market in the United States. The following statement shows the imports, stocks, &c.:

Estimated stock out of grocers' hands on 1st Sept., 1848, of all kinds,	bags,	5,500
Imports direct from Rio de Janeiro,	299,129	
Cuba, Laguira, &c.,	16,341	315,470
Received coastwise for sale (estimated),		40,000
Making a supply of,		390,670

Against a supply of 282,961 bags last year, or an increase of 78,009 bags. Of this increase 59,758 bags are in the direct import from Rio; 7,751 from Cuba, &c., and 20,000 coastwise. The present stock out of grocers' hands is estimated at 6,000 bags, of which 5,000 are Rio and 1,000 other descriptions; showing that the quantity taken for the consumption of the West and South has been 354,970 bags, against 277,500 bags last year, or an increase of 77,470 bags. The first Rio cargo of the season came to hand on the 5th October, but only a portion of it was new crop, and that of so *trashy* a quality that it would only command 5½ cents, while the old crop, of the same cargo, brought 6 cents per pound. Subsequently three cargoes of new crop were disposed of at 6⅛ cents round, but soon the rates began to give way, as the stock accumulated upon a dull market, and on the breaking out of the cholera in December, when for the moment all branches of trade were, as it were, panic-stricken, several thousand bags were sold at 5 cents per pound. This was the extreme of depression, however, and was but momentary, as speculators came forward, and the market soon acquired an upward movement. In January the cargo rates had recovered to 6 cents, in February they were 6⅜, in March 6½ a 6¾ and since then there has been a further gradual improvement, until, under a reduced stock and a fair demand for the West, we close at 7½ cents per pound. The last direct import from Rio was on the 22d June, at which date the stock on sale was estimated at 32,000 bags. It is now reduced, as already stated above, to 5,000 bags Rio and 1,000 of other descriptions—total 6,000 bags. The interior is understood to be unusually bare of stock, and the demand at this point is likely to be larger than in any previous year. At the same time the advices from Rio are that the crop of Brazil will be materially short in quantity, though of good quality, and from Cuba also the accounts are that the crop will be short, owing to excessive drought.—*Annual Price Current.*

AGRICULTURAL DEPARTMENT.

1. PROSPECTS OF THE COTTON PLANTERS.

THE Charleston *Mercury*, in estimating the probable effects of the large crop of 1848–9, presents some interesting figures. The supply of American cotton in Liverpool, from June 1st to January 1st, 1850, it estimates at 951,000 bales. The wants of that market for home consumption and export averaged for the first twenty-two weeks of this year, 28,000 per week; supposing the average continued, the remaining weeks will give 840,000 bales; leaving a stock on January 1st, 1850, of 110,000 bales, against 235,000 last year and 215,000 the year before.

2. FUTURE PRICES COTTON.

It is admitted that circumstances may arise which may effect the correctness of this estimate. Adverse causes may come into play during the interval, arising from the disturbed condition of European politics: or the prospects of their peaceful settlement, the comparatively light stock, and the prospect of a materially diminished crop for the present year, may cause a material advance in prices, and check consumption. But we wish to show, and we think we have estimated, that the crop of 2,700,000 bales has created no glut in the market, even under the pressure of a European war, and that the present prices are too low in view of the relative supply and demand of the article.

Estimating the wants of the United States at 11,000 bales weekly, the Mercury estimates the total American stocks in our ports and inland towns, on 17th November next, 67,000 bales, against 319,102 bales last year and 263,846 in 1847. We really hope this good fortune awaits our cotton growers, and considering the present gloomy prospect of the coming crop in many quarters, we have no doubt that it will be so.

3. COST OF PRODUCING COTTON.

We have seen within a short time various statements published in regard to the cost of producing cotton and what should be its natural price. A writer in the Carolinian declares 5 cents will not pay in that State any profit. He takes an estate well managed, inferior to none in productiveness and affording more than an average yield in the State. The winter but not summer clothing was manufactured at the place. The number of acres was 550, much of which, four years ago, cost $25 per acre, number of slaves forty, one-half field hands. Estimating the negroes at $300 each and the land at $12, with stock, etc., the investment will be $20,000.

INCOME 1848.

Bales of cotton 120; 350 lbs. = 42,500 lbs. at 5 cts....	$2,100 00
Increase in negroes,.........	200 00
	2,300 00
Deduct expenses, etc.,......	1,383 00
	917 00
Value planter's superintendance,.....................	417 00
Net income (or 2½ per cent.),	$500 00

EXPENSES AND LOSS FOR 1848.

Wages of overseer,..........	$300 00
Blacksmith's account iron included,..................	35 00
Medicine and medical attendance,....................	30 00
Bagging, rope and twine for 120 bales cotton,........ ..	150 09
Blankets, thirty in number, at $1 12½ each,.............	33 75
Shoes, twenty-five pairs, at $1 25 per pair,............	31 25
Cotton Osnaburgs, 300 yards, at 8 cents per yard,.......	24 00
Taxes (State, poor and bridge), say,.....................	30 00
Salt, six sacks, at $2 each,...	12 00
Nails, 100 lbs., at 5 cts. per lb.,	5 00
Hoes, one dozen,............	4 50
Sugar and coffee for sick, 75 pounds, at 10 cts. per lb.,...	7 50
Annual wear and tear of land, say 5 per cent. upon estimated value (6,600),.........	330 00
Contingencies, such as restocking the place with mules, wear and tear of wagons, etc.,	200 00
Cost of transporting 120 bales cotton to market, at 75 cents per bale,.................	90 00
Loss by death of old negro, say,	100 00
Whole expenses and loss,....	$1,383 00

Mr. Solon Robinson, a very observant agriculturist, who has been traveling extensively in the South, furnishes some statistics to the same effect. He presents the case of Col. Williams's plantation, at Society Hill, S. C.

4. STATISTICS OF A CAROLINA COTTON ESTATE.

CAPITAL INVESTED.

4,200 acres of land (2,700 in cultivation) at $15,......	$63,000 00
254 slaves, at $350 each, average old and young,.......	89,900 00
60 mules and mares, and one jack, and one stud, average $60,.....................	3,720 00
200 head of cattle, at $10,...	2,000 00
500 head of hogs, at $2,....	1,000 00
23 carts and 6 wagons,......	520 00
60 bull tongue plows, 60 shaving do., 25 turning do., 15 15 drill do., 15 harrows at an average of $1 50 each,.	262 00
All other plantation tools estimated, worth.........	1,000 00
	$161,402 00

CROP.

331,000 lbs. cotton, at......	
13,500 lbs. of bacon, taken for home place and factory,...	675 00

Beef and butter for ditto and sales,	500 00
1,100 bushels of corn and meal for ditto and sales,	550 00
80 cords of tan bark for his tan yard,	480 00
Charges to others for blacksmith work,	100 00
Mutton and wool for home use and sales,	125 00
	2,430 00
331,000 lbs.)	15,464 00
Cents,	4.7

EXPENSES.

Interest is only counted on the five first items, $158,620, at seven per cent.,	$11,103 00
3,980 yards Dundee bagging, at 16 cts. (5 yards to a bale),	536 80
3,184 lbs. of rope, at 6 cents,	191 04
Taxes on 254 slaves, at 76 cts.,	193 04
Taxes on land	70 00
Three overseers' wages,	900 00
Medical attendance, $1.25 per head,	317 50
Bill of yearly supply of iron, average,	100 00
Plows and other tools purchased, annual average,	100 00
200 pairs of shoes, $175; annual supply of hats, $100,	275 00
Bill of cotton and woolen cloth,	810 00
100 cotton comforters, in lieu of bed blankets,	125 00
100 oil cloth capotes (New-York cost),	87 50
20 small woolen blankets for infants,	25 00
Calico dress and handkerchief for each woman and girl, (extra of other clothing),	82 00
Christmas presents, given in lieu of "negro crop,"	175 00
50 sacks of salt,	80 00
Annual average outlay for iron and wood work for carts and wagons,	100 00
Lime and plaster bought last year,	194 00
Annual average outlay for gin, belts, etc.,	80 00
400 gallons of molasses,	100 00
3 kegs of tobacco, $60; 2 bbls. of flour, $10,	70 00
⅝ of a cent a pound on cotton, for freight and commission,	2,069 60
	17,894 48
Deduct other products than cotton,	2,430 00
Cost of cotton,	$15,464 00

Showing the average cost of producing cotton per lb. a little less than 4 cents and 7 mills. Had this cotton sold at 6 cents, the profits would have been $1,973 68, at 7 cents, $5,285 04, which was about what it brought, being little more than 3 per cent.

5. STATISTICS ALABAMA COTTON ESTATE.

The following is given by Mr. Robinson as the results on a plantation in Alabama, in Marengo county, and owned by Robert Montague, esq.

EXPENSES.	
Interest on capital at seven per cent,	$5,756 80
Cash expenses, taxes, average,	100 00
Blankets, hats and shoes, (other clothing all home-made),	250 00
Medical bill, average not exceeding	40 00
500 lbs. iron, $30; hoes and spades, $30,	60 00
Average outlay for mules over what are raised,	100 00
Average expense yearly for machinery repairs,	20 00
Bagging and rope,	350 00
	$6,676 00

CAPITAL INVESTED.	
1,100 acres of land, at $25,	$27,500 00
120 slaves, at $400,	48,000 00
4 wagons,	400 00
5 yoke of oxen, at $30,	150 00
30 mules and horses, at $75,	2,250 00
4,000 bushels corn on hand for plantation use, at 35 cents,	1,400 00
Fodder and oats, do. do. do.,	200 00
40 head of cattle, at $5, do. do.	200 00
70 do. sheep, at $2, do. do.	140 00
250 do. hogs, do. do.	600 00
20,000 lbs. bacon and pork, do.	1,000 00
Plows and all other tools, do.	500 00
	$82,240 00

This crop, 128,000 lbs., at six per cent. net, will leave a balance of $1,004 20, which is just about enough to pay the owner common wages of an overseer, which business he attends to himself.

The Columbia South Carolinian, however, makes considerable havoc among the figures of Mr. Robinson, to which they present a very open flank. Referring to Mr. Williams's place, the editor says:

6. TRUE PROFITS OF COTTON PLANTERS.

Mr. Robinson has included 1,500 acres of land not in cultivation. All the land (4,200 acres) in his estimate of capital was valued at $15 per acre, so that here is $22,500 called "capital" in a business where it is no such thing. It may be said that land for fuel, timber, cattle pasture, and range for stock, are necessary to carrying on the business of cotton planting, and so it is; but we think one-half of the residue of the land, say 750 acres, would be a large allowance for these purposes. At the least, then, we make a reduction of the "capital" to the amount of $11,250—leaving the real capital $150,152. But the most glaring inconsistency which our agricultural tourist exhibits in calculating the profits of a business investment, is in adding the item of interest upon capital as expense. A person investing money in any enterprise is justly considered to be doing a fair business if he makes a small percentage over interest and expenses; and the statement which Mr. Robinson furnishes of Col. Williams's plantation, only proves that our fellow-citizen makes about 12½ per cent. on his capital, and that too with the price of cotton placed as low as six cents *in Charleston*—for freight and commission are included in the table of "expenses."

In the first place, the actual capital invested is clearly misstated, as we have shown above. In the second place, we deny the principal of adding interest on the capital, as part of the expenses, when the object is to find out the profits upon that capital. In the third place, Mr. Robinson calculates interest upon the cost of the stock of the plantation, which is obviously fallacious and deceptive, where its natural increase must amount to more than the interest. In the fourth place, he omits to add to the income of the plantation the natural increase of the labor employed thereon—an item which is always prominent in the planter's calculation, and which would unquestionably amount to 5 or 6 per cent. per annum upon their original cost. And, in the fifth place, he has entirely neglected the increased value arising from the yearly improvement of a well cultivated plantation. We think the case is fairly stated. The result then, according to our views, will be as follows:

Capital invested, $150,152 00.

INCOME OF THE FARM.		Income of farm, ...	$26,793 16
331,136 lbs. cotton, at 6 cents,	$19,868 16	The annual expenses of the farm, as itemized by Mr. Robinson, a full estimate, including freight and commission, ...	6,791 48
Bacon and other provisions,..	2,430 00		
Increase of negroes, say 5 per cent., set down as capital $89,900.................	4,495 00		
	$26,793 16	Net profits of capital invest.	$59,991 68

These profits amount to over *thirteen per cent. per annum* over all expenses—the *Charleston* price of cotton being only put down at six cents. Suppose the crop averaged eight cents in Charleston, as it would do at the present time; the profits would be $26,614 40, or nearly 18 per cent.

The calculations of the Alabama plantation would, perhaps, show a still greater error, but we cannot arrive at correct results, as the whole number of acres, and not the quantity under cultivation, is given: and the statement made, that the plantation, having on it one hundred and twenty slaves, only made about $1,000 over interest and expenses, as Mr. Robinson says, just the common wages of an overseer! We know not what this tourist's object was in giving publication to a statement so much calculated to deceive. We have no doubt, however, but that he unwittingly made the mistakes referred to. We have shown that cotton planting, at a moderate price for cotton, pays 13 per cent. profit.

7. VINYARDS AND WINES AT THE SOUTH.

We notice the formation of a company vinyard at Mobile, and the meeting of a number of gentlemen interested in the cause. A committee of T. S. James, Chester Root, R. B. Hyde, B. C. Rowan, A. Cameron and A. J. Donaldson, were appointed to select a suitable locality for a vinyard, to assess costs of improvement and to inquire if any other branches of business should be connected therewith, etc. To stimulate these gentlemen in their labors very much has been and can be presented, as the reader will find by referring to the articles we have published from Mr. Weller, of North Carolina, and also to those published in the Mobile Herald, from the pen of that enterprising citizen of Mississippi, J. Noyes, esq. According to a report made some years ago to the Horticultural Society of Cincinnati, by Mr. Resor, who cultivated one acre in grapes, the profits are most flattering.

8. VINYARD PROFITS.

The vineyard was planted out with rooted plants in 1834, and came into bearing in 1837. The ground has always been thoroughly hoed in the spring and kept free from weeds, and never manured until last winter, when the ground was covered and in the spring dug in.

Entire cost of the vineyard (except the land) with the cultivation and making of wine for nine years:

2,300 small vines,	$138 00
2,300 pales,	46 00
1,000 do. replaced,	20 00
Trenching ground and planting,	80 00
Manuring last fall	30 00
2 months' work each year, 9 years	225 00
Extra work in making wine, 9 years,	150 00
Interest on investments before crop,	15 00
	$704 00

The quantity of wine made in nine years was four thousand and three hundred gallons, which Mr. Resor very moderately estimates at seventy-five cents per gallon, from the press, although it is well known that the American wines at Cincinnati sell readily at one dollar and fifty cents per gallon, when one year old. These nine crops of wine, at Mr. Resor's low price, amount to three thousand two hundred and twenty-nine dollars and fifty cents. Deduct from this amount the cost of the vineyard and cultivation, and we find a profit of two thousand five hundred and twenty-five dollars and fifty cents for the nine years, or two hundred and eighty dollars and sixty-one cents per year.

COST OF FARMING VINEYARDS IN THE UNITED STATES.

	Per acre.
Ploughing and sub-soil plowing,	$5 00
100 bushels lime, at 15,	15 00
403 vines, two years old at 15	60 45
500 chesnut or cedar posts, 3½ feet long and the size of large fence rails, 8 cents,	40 00
800 lbs. iron wire, No. 11, for trellis, at $6,60 per 100 lbs.	52 80
30 lbs. twelve penny nails, at 5 cents,	1 80
Planting out the vine	7 00
Digging holes and setting posts	10 00
Making trellis	7 95
	$200 00

The cost will vary in different locations, according to the price of lumber, lime and vines; but we feel confident that any where within one hundred miles of Philadelphia, a vinyard can be put out for two-hundred dollars.

9. ANALYSIS OF COTTON PLANT, SEED, SOIL, &c.

We have furnished in our back volumes several different analyses of the cotton plant, but the following from an English journal is so interesting for the conclusions which it deduces with regard to soil, etc., that we extract it:

ANALYSIS OF COTTON, WITH REMARKS ON THE SOIL AND CLIMATE ADAPTED TO IT: BY PROFESSOR LINDLEY.

Since our paper on the chemical analysis of cotton wool and of cotton soils was written, we have received an Analysis of New Orleans Cotton Wool, and of the seed of the same kind of cotton, made by an American chemist, which, we believe, has not yet been published. This is interesting not only on its own account, but as showing the great value of employing the seed as a manure for the cotton plant.

One hundred parts of cotton wool, on being heated in a platina crucible, lost 85.89 parts. The residuum, on being ignited under a muffle till the whole of the carbon was consumed, lost 12.735, and left a white ash which weighed nearly 1 per cent., or 1.9347. Of this ash nearly 44 per cent. was soluble in water. Its constituents were as follows:

Carbonate of potash (with a trace of soda),	44.29
Phosphate of lime (with a trace of magnesia),	25.34
Carbonate of lime,	8.97
Carbonate of magnesia,	6.75
Silica,	4.12
Sulphate of potassa,	2.90
Alumina,	1.40
Chloride of potassium, Sulphate of lime, Phosphate of potassa, Oxide of iron (a trace), } and loss,	6.23
	100.00

ANALYSIS OF COTTON SEED.—One hundred parts, treated as before, lost 77.387, and the residuum, after being burnt under a muffle, left 3.986 parts of a perfectly white ash, the composition of which was as follows:

Phosphate of lime (with traces of magnesia),	61.34
Phosphate of potassa (with traces of soda),	31.73
Sulphate of potassa,	2.65
Silica,	1.68
Carbonate of lime,	.47
Carbonate of magnesia,	.27
Chloride of potassium,	.25
Carbonate of potassa, Sulphate of lime, Sulphate of magnesia, Alumina and oxide of iron, } and loss,	1.68
	100.00

With respect to these analyses, we may for the present observe, that the seeds yielded nearly four times as much of the ash as the cotton itself did, and at the same time contained a much larger proportion of phosphoric acid and of lime. In this respect the quantity of both these substances is greater, as shown by the American analysis, than in that of Dr. Ure. Whether this may be owing to different kinds of wool having been employed, or to differences in the modes of analysis, can only be known when the analysis shall have been repeated by chemists with different kinds of cotton.

In resuming our observations on soils, it is first of all necessary to observe that, though no one will dispute the paramount importance of the chemical constituents of the soil, yet these may be considered in some respects to be only of comparative value, as it is equally necessary to attend to the physical state of the soil, and to both in connection with the climate of particular localities. The mechanical state of the soil, its greater or less degree of porosity or of tenacity, enabling the roots to spread with more or less facility, so as to fix the plant steadily in the earth, at the same time that they supply it with a large portion of its nutriment, is necessarily of great importance. But as a considerable portion of the food of plants is supplied by the air, its different states and due supply require also to be attended to, in addition to climate: no chemical composition or mechanical states will compensate for unsuitableness of climate. We all know that our oaks are as little likely to flourish within the tropics, as South American palms in our meadows; and no one now expects that our rich variety of orchids would flourish, if, supplying them with every requisite of site, of soil, of culture, and even of temperature, we denied them a moist atmosphere. And yet a few years only have elapsed since it was considered a rarity to flower these *air plants*, and also since mountain rice was attempted to be cultivated here in the open air, because it came from a cool climate, and was said to be cultivated without irrigation. But it was forgotten that, during the season of cultivation in its native mountains, rain falls almost every day, and the air is in a state of continual moisture. So also in the culture of cotton, a certain state of the soil, both with respect to its chemical composition and its mechanical state, may be well suited to one situation, and yet not be desirable in another, chiefly from a difference in the condition of the atmosphere. For instance, a certain degree of porosity of the soil may retain and bring just enough of water within the reach of the roots, and yet if the atmosphere became more damp, the soil may require to be made dryer by drainage Again, if in another situation the air is more dry, and evaporation necessarily greater, both from the surface of the earth and from that of the leaves, a soil more retentive of moisture will be more suitable than one which is more open, and which thus allows moisture to escape, not only by evaporation, but by drainage. These varieties may be observed, not only in the soil and climate of different localities, but even in the same locality at different seasons of the year, especially in a country like India, which, in the language of meteorologists, is in many parts one of extremes. As plants obtain from the ground their water, holding in solution saline and earthy particles, and are dependent upon the air for the elements of organic matter, it is evidently essential to pay equal attention to both cases, for it is difficult, nay impossible, in both cases to say whether the soil or the climate has the most influence upon successful cultivation, and it is nearly as useless, to use the words of Mr. Neill, as "attempting to decide which half of a pair of scissors has most to do in the act of cutting, or which of the factors 5 or 6 contributes most to the production of 30."

With respect to the practical inferences deducible from the chemical analysis, we may first quote the opinion of Mr. Piddington, that carbonate of lime was essential to good cotton soil. Subsequently he observed that the American, the Maritius and the best Singapore soil, contain a considerable per centage of vegetable matter, and some part of it easily soluble in cold water, while the Indian soils contain very little vegetable matter, and this wholly soluble in water; but that the best contain a far larger proportion of carbonate of lime, and some of them their iron in a different state from the others. The lime, though not indispensable, he supposes may be highly useful; but he ascribes greater value to the presence of vegetable matter. For a soil in Bengal, which contained exceedingly minute proportions of lime and carbonaceous matter, and in which he cultivated cotton, worth from 9*d* to 11*d* per pound, as an experiment, for seven or eight years, during which he had always good and often abundant crops, he ascribes this effect to the plants having been constantly manured with the black, pesty earth, so abundant in the jheels (pieces of water) of India, and of which an average good specimen contains 26.00 per cent. of vegetable matter, and 15.00 per cent. of carbonate of lime, yielded chiefly by the small shells contained in the above deposits.

Mr. E. Solly, as the result of his analyses, remarks: "that the goodness of the soils from Georgia depended, probably, far more on the mechanical structure than on the chemical composition, and that the presence of lime or any other substance would appear of far less importance than that the soil should be, not too rich, but of a light and porous character, so that delicate fibres of the roots might penetrate easily in all directions." This opinion is probably not far from the truth, wherever the climate is most suitable to the cultivation of cotton.

Dr. Wight, after practical experience of some years, states that where it is in his power to choose, he prefers "a deep, dark colored, light, almost sandy loam, and if it has been long out of cultivation, so much the better." The black cotton soil, in which so much of the cotton of India is grown, and which is generally considered the best for the purpose, is remarkable for its power of retaining moisture; while of the red soil he says: "again, I am informed that in some parts of the country, for example, in the Vizagapatam district, the finest cotton crops, both as to quantity and quality, are raised on red soils, and the redder the better for the purpose." But the suitableness of these several soils we must consider in connection with climate.

10. INDIAN CORN.

[We have had for some time upon our table, and desired to publish, the valuable remarks and accompanying papers, presented by that distinguished agri-

culturist and statesman, the Hon. Joel R. Poinsett, before the Winyah Agricultural Society last year. It will be read with great interest by all who are interested in the culture of corn, and whose number is legion:]

REPORT ON THE CULTURE OF INDIAN CORN.

The Committee appointed at the last anniversary meeting of this agricultural society, to report on the culture of Indian Corn, have used their best endeavors to ascertain the several methods pursued in its cultivation by practical farmers in different parts of this continent and in Europe; and have, through their chairman, addressed letters to some of the most experienced and successful planters in this State, and received in reply important information, which they beg leave to append to this report.

This grain was named by Linæus *Zea Mays*, and classed *Monœcia Triandria*. It is now conceded to be a native of America, and appears to have been by the first conquerers and earliest settlers, from the north-eastern part of North America to the southern provinces of Chili on the southern continent. Mais, or Indian Corn, was first introduced into Spain about the beginning of the sixteenth century, from whence its cultivation spread into Africa and Asia, where it has ever since been a favorite article of food. From Asia it was probably carried back to Europe, for we find it called in France *Bla de Turkie* (Turkish Corn), and in Italy *Gran Turco*. At the present day Indian Corn has been introduced and is cultivated in almost every part of the universe where the summers are sufficiently long and warm enough to ripen the grain—in France and Germany, as far north as 48° north latitude. In the south of France, on all the shores of the Mediterranean, in Spain, Italy, the countries of the Levant, in many other portions of Asia and of Africa, and in North and South America, it is the food in most common use. The English Quarterly Journal of Agriculture says: "It is that which, next to rice, supplies food to the greatest number of the human race; and it may be held to be the most valuable gift of the old world to the new." This grain adapts itself to almost every variety of climate, and is found growing luxuriantly in the low countries of tropical Mexico, and nearly equally well on the most elevated and coldest regions of the table land; in the rich valleys of the Cordilleras or the Andes, and on the sandy heights of those mountains, wherever a rill of water can be brought to nourish its roots. In short, it ripens under the sun of America, in every part of both continents.

Like other grains that have been long cultivated, Indian corn abounds in varieties. In Spain they count no less than one hundred and thirty, and here in the United States we might safely state the number at upward of forty. The differences consist in size, color, period of maturation and hardness and weight of grain. Of size, there exists a considerable variety, from the Zea Ouragua, of Chili, and the Egyptian or chicken corn, both extremely diminutive, to the large white flint and gourd seed corn of these southern states. The differences in color are the red, yellow and white. The period of maturation varies, apparently, very considerably; but it is questionable whether this variation is real and independent of climate. In the North, corn ripens in a shorter period of time than it does with us in the South, owing, possibly, to the greater length of the summer day in those latitudes. It is true, if seed be brought from the North it will ripen earlier the first year than corn raised from seed grown here; but it is found the second year to require a longer term, and soon loses altogether its habit of early maturation. On occasions, therefore, when it is desirable to plant late in the season, seed corn raised at the North ought to be used, as it will mature in much less time than that raised at home. In the French catalogues, the *mais en poulet*, and the *quarantaine*, chicken and forty-day corn, are recommended as the earliest; but we have no means of judging the effect of climate upon these varieties. In selecting varieties, some experienced and judicious farmers prefer that which yields the greater number of ears, without regard to their size or number of rows. Others prefer that which furnishes one or two large ears, having from twelve to twenty-four rows. At the North, the yellow corn bears the highest price in the market, and in our country it is considered the most prolific and best suited to feed cattle and hogs. For bread, the white dutton is preferred at the North, and the white gourd seed is used for that purpose in the upper part of this State. We have a valuable variety cultivated in our interior, having rarely less than eighteen rows on the cob. We think, however, preference ought to be given to white flint corn, as it is unquestionably the heaviest and contains the greatest proportion of farina. We believe that it would be advisable to purchase and sell Indian corn by weight instead of measure, as there can be no doubt the heaviest corn contains the greatest amount of nutriment.

The method of cultivation varies very much in this country, and in other parts of America and Europe. In Europe, generally, as well as in the northern States, it is sown much closer than our climate and the size and growth of our corn will permit, and the product is, in consequence, frequently greater. In Lombardy, where corn is sown in close drills, and still nearer proximity in the drill, the produce varies from fifty to seventy-five bushels to the acre. The land is highly manured, and the corn sowed after flax, rape seed, or on clover seed. In other and poorer districts of Italy, and in the south of France, the average does not exceed twenty-five bushels of corn and five of beans. In Mexico and throughout Spanish America, Indian corn is sowed about three feet and a half between the rows, and two feet apart in them. The average produce can hardly be estimated in so extensive a country, possessing such an infinite variety of soil and climate; but the product is abundant, especially in the south, where the lands are irrigated—much greater than with us in the Atlantic states. The fresh, strong and fertile lands of the West will compete, however, with the best in the world. The largest crops throughout that region, and indeed everywhere, appear to be made upon fresh turned sod; and next, wherever the earth, besides being enriched with an abundant supply of manure, is deeply stirred. In addition to what has been said by our President on the subject of subsoil plowing, in the subjoined letter we find the following observations in a memoir, published by one of the best practical farmers of Delaware: "To obtain the greatest possible quantity of Indian corn from the least allowed quantity of land, the soil should be as deep as the farmers can make it—if possible, twelve inches. Admitting the same quality in each acre, it will, I think, be found on trial, that if one acre of land, the soil of which is four inches deep, and which has been plowed for the crop no deeper, will produce twenty bushels of corn, the same acre, extending the soil and plowing eight inches, will produce forty bushels; and if twelve inches, eighty bushels, with the same labor."

In the preparation of the land by manuring, we are inclined to the opinion that it is always better to spread the manure evenly over the surface, if the farmer has enough; next, to spread it in the ridges and bed over it; and, last and least, to put the manure in the holes where the grain is to be deposited. In the first method, where the manure is spread over the whole surface of the field, the lateral rootlets—which in good soil extend five or six feet from the stalk—receive abundant nourishment throughout the whole period of the growth of the plant; which is not the case where the manure is confined to the furrow or to the hills. In the dry summer of 1846, the difference in the crops of corn, treated in these several different ways, was very remarkable—the first yielding a fair average, while the others were burnt up and produced nothing.

Various methods are practiced of preparing the seed, both to preserve it from the devastation of birds and insects, by rendering it nauseous and repulsive to them, and by hastening its germination. For these purposes, the most common practice is to soak the seed corn in a weak solution of coal tar, separating the grains by means of sand or ashes. Another is to use an infusion of nitre with the coal tar, separating the grains as above. Others again recommend soaking the seed for eight and forty hours before planting, in a solution of muriate of ammonia. One pound of this salt being dissolved in a sufficient quantity of water to soak a bushel of seed corn. Thus prepared, the grains germinate more rapidly, and are said to maintain their superiority, *ceteris paribus*, throughout the growth of the crop. We have known a solution of sulphate of ammonia tried with equal success. It may be prepared by adding an infusion of gypsum (plaster of Paris) to a solution of carbonate of ammonia.

Your Committee agree entirely with the President of this Society, in his recommendation to cease the use of the plow, in cultivating Indian corn, early enough to permit the rootlets to attain their full growth, and to clear and to lay by the crop with the cultivator and hoe. To shorten these feeders is to diminish the produce of the crop, as his well conducted experiments will show.

In many parts of our State it is the practice to top the corn, and in all, to strip the blades at the period when the grain is considered sufficiently ripe; but in the north-eastern and western States it has been found, by experience, more profitable to cut the corn off at the surface, and stack it in small stacks in the field, until the grain is sufficiently hardened to admit of its being hauled in. It is then stripped from the stalk and shucked at the bin. With us in the low country, the shucks are left on the stalk and both exposed to rot for manure, and not unfrequently both are piled up and burnt. This must be regarded as a wasteful process. The stalk, when properly cured, contains a great deal of saccharine juice; so much, that in many parts of Spanish America, sugar was made from the stalk of maize before the introduction of the sugar cane. The shuck is always cured and put away, in the upper country, and the best farmers there throw a few handfuls of salt upon each layer of shucks. This provender would be found very useful on our plantations, and prove a wholesome and nutritious food for working cattle and mules.

As the experience of more than a quarter of a century proves the superiority of cutting off corn at the ground and stacking it in the field, over the method practiced by us, the gain being no less than ten per cent., we will, at the risk of being a little too tedious, describe a very common method of performing this operation. A laborer, walking between the second and third rows, counts to the eighth hill, and ties or locks together the stalks on the four center hills, above the ears, which four hills are not to be cut, but left as a support to begin the stack. He then counts on sixteen hills further, and ties the four hills in the same manner; and so on through the whole field. Two cutters follow between the first and second, and third and fourth rows, cutting the corn close to the ground and casting it forward; the carriers take it and set it up straight in equal proportions round the four stalks left standing. For security against the high winds, these stacks may be bound round two-thirds of their height from the ground. Others, again, simply cut all the corn and stack it in the field, thirty or forty stalks to the stack, binding the stalks together near the top. After the corn and stalks are hauled home, and the latter stripped, they may be stacked in the form of our potato houses, with two crochets at each extremity, a ridge pole and a few laths The first row of stalks is placed with the butts on the ground, and the succeeding rows with the butts uppermost, so as to allow the water to drip along the leaf blade. The interior of such stacks serves to store pumpkins, turnips, &c., and preserves them from the frost.

Your Committee will conclude this report by giving the opinion of the celebrated agriculturist, Arthur Young, in relation to this plant. He first met with Indian corn in France, and at once appreciated its full value. He says: "For the inhabitants of a country to live on that *plant*, which is the preparation for wheat, and keep their cattle fat upon the leaves of it, is to possess a treasure for which they are indebted to their climate." "Planted in squares, or rows, so far asunder that all imaginable tillage may be given between them, and the ground thus cleaned and prepared at the will of the farmer, is an invaluable circumstance; and finally it is succeeded by wheat. Thus a country whose soil and climate admit the course of 1st, Indian corn, and 2d, wheat, is under a cultivation that perhaps yields the most food for man and beast that is possible to be drawn from the land."

The superiority of this rotation is to be accounted for, not only by the reasons assigned by Arthur Young, that the successful cultivation of Indian corn requires that the land should be highly manured, thoroughly and frequently stirred, and kept clean from grass and weeds; but because, through the medium of its broad leaves, this plant derives a large portion of its nourishment from the atmosphere, and, possessing less gluten than other cereals, extracts from the earth materials not required for the growth of wheat. In consequence of this eulogium, and of the subsequent publications of Cobbett on the same subject, several attempts were made in England to cultivate Indian corn, but hitherto without success. It is to be seen there only in gardens, where it is raised and brought to maturity by forcing it forward in the early spring, and transplanting it into the open beds after the frosts are over. Wherever seen, it is an object of admiration. And its lofty stem, broad leaves, silken tassel and tall waving flower, justly entitle it to be considered the most beautiful, as it is the most bountiful, of all the cereal grasses.

Respectfully submitted,

J. R. POINSETT.

10. PANAMA COTTON.

[The specimens of cotton seed and cotton received in the annexed letter, have been distributed by us. The cotton is silky, fine and glossy, but with no length of staple. The seed are about the size of duck shot. We have given specimens to Gov. Seabrook, Gov. Hammond Joseph Edings, Rev. Mr. Wallace and R. G. Norton, of South Carolina; Andrew Calhoun and Col. A. J. Pickett, of Alabama; Gov. Towns, of Georgia; Senator Westcott, of Florida; Wm. Goodman, Thomas Affleck, Gen. Gerault, of Mississippi; W. E. Hamilton, Hon. H. Bry, Hon. S. Downs, of Louisiana; J. W. Clay, of Arkansas. The very few seeds that remain, can be had by any of our friends who will write for them.—Ed.]

Panama, New Granada, May 18th, 1949.

Mr. J. D. B. DeBow, Editor Commercial Review: Dear Sir—Herewith I send you a specimen of the "tree cotton," such as is seen growing wild upon the Isthmus. I send it to you, knowing the interest you take in the natural productions of the "South and West," and trust you will forward some of the seeds to such cotton planters as will give them a fair trial. Perhaps a "cross" may be produced with the ordinary cotton to the advantage of the latter. The tree from which the pods were plucked containing the specimens, was of about six inches in diameter and ten to twelve feet high. I have since, however, seen them of twelve inches diameter and from twenty-five to thirty feet in height.

Package No. 1 contains the cotton as taken from the pods, and is the contents of two pods. No. 2 is the cotton as separated, and No. 3 the seeds alone. These pods were six and a half inches in circumference.

You will not fail to notice with what ease the seed is separated from the cotton, and the peculiar silkiness of the fiber. Of course it will require but little "ginning." Yours, truly, W. A. BAKER.

11. SUGAR.

The following is a statement of the production and consumption of sugar for four years past, and estimate for the present year, together with the stock on the 31st of March of each year (in tons):

Growth.	1845.	1846.	1847.	1848.	1849.
British West Indies,	142,000	107,000	159,000	145,000	140,000
Mauritius,	36,000	43,000	65,000	57,000	45,000
Bengal,	67,000	68,000	70,000	60,000	60,000
French Colonies,	102,000	80,000	80,000	60,000	40,000
Dutch and Danish Colonies,	25,000	20,000	25,000	20,000	19,000
Cuba and Porto Rico,	115,000	230,000	310,000	290,000	210,000
Java,	89,000	86,000	81,000	79,000	75,000
Siam and Manilla,	15,000	26,000	30,000	20,000	20,000
Brazil,	93,000	75,000	112,000	120,000	80,000
Louisiana,	95,000	90,000	65,000	120,000	90,000
Beet Root,	70,000	80,000	90,000	90,000	70,000
Total growth,	849,000	905,000	1,087,000	1,061,000	845,000
Stock, March 31,	122,000	121,000	87,000	143,000	130,000
Total supplies,	971,000	1,026,000	1,174,000	1,204,000	975,000
Stock succeeding Mar. 31,	121,000	87,000	143,000	130,000	-
Total consumption,	850,000	939,000	1,031,000	1,074,000	

Consumption in 1848,	1,074,000
For consumption in 1849,	975,000
Deficiency,	99,000

The low price diminishes beet root cultivation. Emancipation in the Danish and French colonies produces the same result.

PROGRESS OF OUR COMMERCE AND COMMERCIAL TOWNS.

1. THE RIO GRANDE TRADE.

Every month, almost every day, opens to the enterprise of our countrymen new fields of commercial progress. Since the close of the Mexican war, the Rio Grande has furnished an important medium of trade with that republic, growing, daily, more considerable, and extending even to the interior and most distant provinces. The port of entry, established by the last Congress, at *Point Isabel,* provides a valuable adjunct to the growing trade. This point is the location nearest to the mouth of the Rio Grande, where an immunity from the storms and floods of that region, and a sufficient draft of water, can be enjoyed. Its situation is on the main land, ten miles distant, in a straight line, from the mouth of the river, and it is approached through Brazos entrance. Vessels drawing six feet may reach the very wharf of Point Isabel, we believe, whilst those of larger tonnage discharge their cargoes at Brazos, to undergo a short and safe lighterage of three miles, to that place. An excellent road, of about 26 miles length, leads to Brownsville, a town which has rapidly grown up on the American side, opposite Matamoras, and so considerable is the merchandise transported over it, that we understand a railroad is in projection, which will not exceed 18 miles in length, and can be built at but slight expense. the route by Point Isabel and the Rio Grande, to New Mexico, Santa Fee, California, &c., presents numerous advantages. The Rio Grande may be made navigable for light steamers, to its junction with the Puerco. Regular steamers now ply from Brownsville to Camargo, and even Laredo. The most distant Mexican province now supplied by the traders of Santa Fee, by the way of Missouri, is not more than 500 miles from a navigable point on the Rio Grande. The cost of transportation from St. Louis to Santa Fee is now 40 per cent. in value upon the goods, and a great change may be anticipated, even should there be no railroad to California.

2. TRADE OF ST. LOUIS — TONNAGE.

The rapid growth of St. Louis, which already numbers 63,000 inhabitants, is one of the most remarkable evidences of the vigor of our great West. Like a young Hercules, she struggles against every misfortune, and rises superior to them all. Though disease may decimate her population, and fearful conflagration sweep off millions of her wealth, her recuperated energies need scarcely be tasked to heal again the breach. We always note, with delight, the evidences of her progress, and expect, when in the fullness of time the great valley shall be connected by a railroad with the Pacific, New Orleans and St. Louis will be the two great cities of the continent, capable of vieing with the empire city of New York! The following, from the St. Louis Union, will show the tonnage of St. Louis for 1847 and 1848:

	1848.			1847.
Boats arriving from	Number of steamboat arrivals,...	Measured tonnage, of steamers,....	Estimated tonnage, including keels, flats, &c.	Estimated tonnage, including keels, flats, &c. .....
Illinois River,........................	710	101,391	140,000	104,000
Upper Mississippi River,...............	619	198,510	211,000	151,000
Missouri River,........................	363	57,640	57,640	55,000
Alton,.................................	615	84,454	38,200	35,500
Coast,.................................	105	23,120	12,000	1,800
Cairo,.................................	136	28,403	29,000	14,000
New Orleans,...........................	443	173,223	120,000	100,000
Ohio River,............................	506	103,546	83,000	75,000
Totals,................................	3,497	770,287	690,840	536,300

Of the estimated tonnage of 1848, about 26,700 tons is that of keels, barges, and flat-boats.

I will be seen, by the above table, that the increase of imports from New Orleans, and the Ohio River, has been 28,000 tons; while that from all other points, inclusive, has been 126,540 tons.

These data show the gratifying fact, that the agricultural receipts have increased in a far greater ratio than those which may be more strictly classed as imports.

Of the 260 steamboats engaged in this trade, 75 were built at Pittsburgh, 45 at St. Louis, 36 at Cincinnati, and the remainder at Louisville, Jeffersonville, Wheeling, New Albany, Brownsville, etc., etc.

The quantity of lumber landed at St. Louis, in 1848, was 22,890,299 feet; 15,854,500 shingles; 1,701,005 laths; 1,322,196 coopers' stuff; 39,865 cords of wood; also, 7,254 loads hay.

3. TRADE OF MOBILE.

From the Herald and Tribune's annual statement, we are enabled to furnish the annexed statistics. Mobile has lately exhibited great enterprise in her railroad projection to the Ohio, and in the energy with which she has pursued it. In the last season she lost about 10,000 bales cotton, which were brought directly from Montgomery to New Orleans, and in the coming season may, probably, lose more, since a new line of steamers will run between the two points, making the intercourse continual.

The net receipts cotton at Mobile, to 1st Sept., 1849, are 509,867 bales; the shipments to foreign ports, 396,341, valued at $12,300,718, being an average value, per bale, of $31.04; per lb., 6¼ cts.; and average weight, per bale, 509 lbs. The crop of south Alabama being worth $15,097,064.

Nine turpentine distilleries are in operation, and the receipts have been considerable, though not equal to the demand. The supply next year will be much larger, and the business must become an extensive and profitable one.

The lumber trade of Mobile is, also, important, forty or fifty mills being at work within that and Baldwin county. The exports have been over 5 millions feet, besides large quantities of staves, shinglee, cedar logs, ship timber, &c.

There have been exported, this season, only 2,533 sacks Indian corn, and 679 bbls. flour; also, 458 packages and 6,872 loose hides; 150 bbls. tar, 550 do. resin, 63 do. pitch; 414 bales rope cuttings, 761 bales domestic goods, 25 bales cotton yarn; 22 casks beeswax, 214 do. tallow; 4,000 horns, 3,000 bones; 30 hhds. and 95 boxes tobacco.

4. COTTON CROP OF SOUTH ALABAMA FOR 28 YEARS.

Years.	Bales.	Increase.	Decrease.	Years.	Bales.	Increase.	Decrease.
1822,	45,423	20,033		1836,	237,590	36,745	
1823,	49,061	3,638		1837,	232,685		
1824,	44,924			1838,	309,807	77,122	4,900
1825,	58,283	3,359		1839,	551,742		
1826,	77,349	16,096		1840,	445,725	193,983	58,063
1827,	89,779	15,400	4,137	1841,	317,642		
1828,	71,155			1842,	318,315	673	128,083
1829,	80,339	9,174		1843,	481,714	163,366	
1830,	102,684	22,355		1844,	467,990		
1831,	113,075	10,391	18,624	1845,	517,196	49,206	13,724
1832,	125,605	12,530		1846,	421,966		
1833,	129,366	3,761		1847,	323,462		95,230
1834,	147,513	20,147		1848,	440,336	116,874	98,504
1835,	197,847....	48,334		1849,	518,706	78,370	

By the tables of the *Advertiser*, we learn the exports of Mobile, for the year ending 31st July, 1849, have been $12,823,755.99.

5. CHARLESTON.

From the Charleston Courier we obtain the imports and exports of that city during 1848. The exports were, in all, $10,453,549; $2,481,864 of which being coastwise. 120 American vessels, with 28,949 tons, and 1,102 men, entered from foreign ports; also, 127 foreign vessels, with 39,336 tonnage, and 1,193 men.

The number of clearances to foreign ports was 187 American vessels of 57,348 tons and 2,152 men, and 158 foreign vessels with 49,900 tons and 2,090 men. The total value cotton and rice exported in *American* vessels, to foreign ports, $4,315,665; in *foreign* vessels, $3,521,231. Cotton and rice exported coastwise, $2,204,868.

6. COMMERCE OF NEW YORK.

Having furnished, in the pages of this No. of the Review, the statistics of New Orleans trade, we are anxious to present, at the same time, those of New York, our great commercial sister, in order that the reader may compare them together. He will be much aided by a reference to our No. for December, 1848, where a comparison of the shipping of each is made.

EXPORTS TO 31st AUGUST, 1848.

Wheat Flour, bbls.,	415,222	Ashes, bbls.,	17,368
Rye Flour, bbls.,	16,906	Wax, 100 lbs.,	4,369
Rice Flour, bbls.,	5,202	Salted Hides, No.,	382
Corn Meal, bbls.,	149,275	Tobacco, leaf, hhds.,	4,807
Bread, bbls.,	40,988	Tobacco, cases and bales,	6,731
Wheat, bu.,	304,939	Tobacco, manuf'd, 100 lbs.,	25,113
Corn, bu.,	2,477,363	Wool, 100 lbs.,	107
Oats, bu.,	21,399	Hemp, 100 lbs.,	6,184
Rye, bu.	26,491	Hops, 100 lbs.,	3,434
Barley, bu.,	8,618	Clover Seed, bbls.,	2,367
Peas and Beans, bu.,	25,986	Flax, 100 lbs.,	4
Rice, tcs.	18,834	Lead, pigs,	16,748
Beef, tcs.,	12,937	Sperm Oil, gals.,	89,095
Beef, bbls.,	24,212	Whale Oil, gals.,	1,423,601
Pork, bbls.,	74,927	Whalebone, 100 lbs.,	15,732
Lard, 100 lbs.,	143,657	Oil Cake, 100 lbs.,	92,095
Bacon and Hams, 100 lbs.,	117,441	Turpentine, bbls.,	159,933
Butter, 100 lbs.,	12,280	Spirits Turpentine, gals.,	425,064
Cheese, 100 lbs.,	117,629	Tar, bbls.,	26,863
Tallow, 100 lbs.,	29,815	Resin, bbls.,	127,529
Cotton, bales,	190,005		

IMPORTS.

We extract from the *Shipping List* the following comparative statement of the imports at New York during the past three years:

	1848.	1847.	1846.
Coffee, bags,	418,003	427,470	382,846
Cotton, bales,	379,902	289,252	322,456
Earthenware, crates,	28,291	27,762	29,417
Figs, drums,	67,202	144,776	35,893
Hemp, tons,	474	779	145
" bales,	52,624	57,186	43,623
Indigo, cases,	1,410	1,083	997
" ceroons,	1,900	764	1,164
Lead, pigs,	387,991	398,865	293,796
Molasses, hhds.,	76,047	76,971	73,822
" tierces,	6,576	5,931	5,168
" brls,	42,333	21,473	23,557
Raisins, casks,	9,903	7,896	7,962
" boxes	390,931	260,457	354,732
" drums,	828	1,384	3,305
Rice, tierces,	38,270	39,442	38,443
Salt, bushels,	2,009,897	1,947,913	1,303,663
Saltpetre, bags,	19,565	31,395	9,295
Sugar, hhds.,	108,703	87,861	67,238
" tierces,	2,258	779	577
" brls.,	19,946	17,765	7,242
" boxes,	125,354	144,898	85,744

Sugar, bags,	90,008	24,215	37,652
Tin, slabs,	54,291	26,750	21,801
" boxes,	174,049	125,442	231,830
Tobacco, hhds.,	12,213	11,946	8,674
" bales,	23,153	21,053	14,916
Wines, pipes,	846	725	1,289
" hhds.,	13,471	7,042	12,415
" qr. casks,	40,160	32,222	41,691
" brls.,	5,973	3,251	11,293
" boxes,	23,206	19,369	19,911

7. NAVIGATION LAWS.

The late change effected in the British policy, by a repeal of the navigation laws in many leading particulars, is likely to be very important in its influence upon the commerce of our country. Mr. Kettell, of New York, says, since the first modification of the navigation act, in 1815, the ships of the United States and of Great Britain have been upon a footing of perfect equality in the international trade. The vessels of neither nation have enjoyed any legal advantages over those of the other, and the result has been as seen in the following table:

	American ships entered.		British ships entered.	
	Tons.	Imports.	Tons.	Imports.
1828,	211,250	$21,502,152	80,864	$3,017,051
1847,	467,278	33,600,358	445,890	18,044,749
Increase,	276,028	12,098,206	365,026	15,027,698
	Cleared.		Cleared.	
	Tons.	Exports.	Tons.	Exports.
1828,	204,220	$19,602,658	68,886	$5,897,259
1847,	607,513	49,178,772	417,252	37,088,163
Increase,	403,293	29,576,114	348,366	31,190,904

This has been the progress of the international trade, the aggregate of which has vastly increased, and of that increase the American vessels have enjoyed the largest proportion. Thus, while the outward bound American tonnage increased 403,293 tons, the British increased 348,366 tons. Now, the protectionist would, in order to deprive foreigners of this latter amount, take from the American shipping interest the larger figure.

8. FOREIGN AND AMERICAN SHIPPING.

The discussion of the navigation laws, in England, although not likely to result in that radical change with respect to the coasting trade which the English ministry at first proposed, will be productive of much good, by removing some of the difficulties that present themselves in the way of the shipping interest; by which term is meant, not only ship owners, but ship builders, sail makers, cordage makers and hemp growers. The interest of ship owners is often at variance with these latter, because vessels built in a time of high prices and duties on hemp, cordage, canvass and iron, are of higher cost than when constructed of less taxed material, and the cheapening of these tends to the construction of a greater number of ships of American materials to compete with vessels of high cost, to the dissatisfaction of the owners of the latter. It is, undoubtedly, the case, that better and cheaper vessels can be built in the United States, of American oak, hemp, and canvass, than in any other part of the world; and as soon as American built ships, as proposed, can be naturalized in England, a large market will be opened for them. Thus it is the fashion, in and out of Congress, to appeal to the increase of Hanseatic shipping in our ports, as an instance of the unfavorable working of reciprocal treaties. The fact is, that those ships are mostly American, sailing under the flag of the Hanse Towns. The treaty with the Hanse Towns, made in 1827, by Henry Clay, contains the singular clause, that in consideration of the limited territory of those cities, vessels *owned* by citizens of either of those republics, wherever built, shall be deemed Hanseatic, provided they are manned by a Hanseatic citizen, and that three-fourths of the crew are subjects of those cities. Now, it costs about $100 to naturalize a ship and master in the Hanse Towns, and an American vessel trading between the United States, West Indies, and the Hanse Towns, can change her flag, and sail as a Hanseatic vessels at smaller cost, because the German sailors require less provisions and wages than Americans. Such a vessel arriving in the United States is entered as Hanseatic tonnage, when, in fact, she is the result of American industry, and carries freight on American account. The following table indicates the tonnage of the leading nations that have entered the United States at different periods:

NATIONALITY OF TONNAGE ENTERED THE UNITED STATES.

	1833.	1846.	1847.	1848.
American, ...	1,111,441	2,151,114	2,101,359	2,393,483
Swedish and Danish, ...	26,838	27,672	43,807	41,897
Dutch, ...	1,309	4,299	13,621	12,758
Hanseatic, ...	29,285	63,669	84,875	82,805
British, ...	383,487	813,287	993,210	1,177,104
French, ...	20,917	13,666	30,704	24,970
Spanish, ...	33,560	7,504	18,852	29,342
Other, ...	2,109	49,642	35,277	37,315
Total foreign, ...	496,705	959,739	1,220,346	1,405,191
Grand total, ...	1,608,146	3,110,853	3,321,705	3,798,673

A considerable portion of this increase of British tonnage is nominal. Thus of 800,000 tons increase since 1833, very nearly one-half is in the small lake ports of northern New York. That is, there entered eight ports, Buffalo Creek, Sackett's Harbor, &c., in 1837, 55,000 tons British tonnage, and in 1848, 430,000 tons; and this apparent increase is merely repeated entries of the same small craft. The suspension of the navigation laws, in respect of breadstuffs, by England, France and Belgium, in 1847, greatly promoted the entry of foreign tonnage, to avail itself of the high freights for the food it was permitted to carry to England; and by this means the United States farmers were enabled to sell a considerably larger quantity of breadstuffs than the capacity of the American mercantile marine could transport. The modifications of the tariffs by the United States and Great Britain have produced a much greater international exchange of bulky articles, and the high freights of 1847 gave an impulse to ship building, manifest in the following table:

VESSELS BUILT FOR THE FOREIGN TRADE IN THE UNITED STATES.

	Tons built.	Sold to foreigners.	Lost at sea.	Condemned.	Net increase.
1846,	58,294	10,931	22,118	4,242	20,981
1847,	78,849	13,907	22,078	5,096	37,766
1848,	135,855	11,079	26,872	3,602	94,332

VESSELS BUILT FOR COASTING TRADE IN THE UNITED STATES.

1846,	129,929	.....	9,093	2,838	117,997
1847,	164,883	3,061	11,201	5,003	145,618
1848,	182,189	1,377	14,794	3,552	162,464

So rapid has been the increase of ship manufacture in the United States, and all interests have been improved by this increased demand for ships. Thus, on the usual calculation that every 500 tons requires 12 tons hemp for cordage, &c., the increased demand for that article, from riggers and cordage makers, must have been equal to 6,000 tons per annum, against an import of 1,350 tons. The reduction of duties on the foreign article has given nearly the whole demand to the American grower; because, when the duties were high, ships purchased the bulk of their outfits abroad, thus producing an effect the very reverse of what was intended by the tariff. The premiums to English ship owners to purchase American ships must greatly extend the demand, and in a higher degree promote the prosperity of the building interest.

The increase in the tonnage of the United States, in the different branches of trade, presents singular results, as indicated in the following table:

EMPLOYMENT OF UNITED STATES TONNAGE.

Foreign trade.	1835.	1846.	1847.	1848.
Freighting,	788,181	937,019	1,047,456	1,252,640
Steam,	......	6,286	5,631	16,067
Whaling,	97,640	186,980	193,858	192,179
Total foreign,	885,821	1,130,285	1,246,945	1,360,886
Coasting trade.				
Freighting,	665,120	948,264	1,053,410	1,209,165
Steam,	127,181	241,606	399,210	411,823
Fisheries,	136,817	108,979	109,131	126,643
Total coasting,	929,118	1,399,270	1,554,253	1,747,631

The tonnage employed in foreign and coasting freighting shows a corresponding increase. The latter is entirely protected from foreign competition, while the former meets the vessels of all those nations with which we have reciprocity treaties, on entirely equal terms. Thus, between Great Britain and the United States the vessels of neither county are protected by laws, while, with the colonial trade, British shipping is supposed to have advantages, according to the protective theories, over the American. Now, notwithstanding the vast expanse of our inland waters, on which transportation is monopolized by American tonnage. the quantity employed increases no faster than the foreign, which is exposed to unlimited competition. On the other hand, its increase depends upon the prosperity of the foreign shipping. Thus, an active foreign demand for produce puts in motion the products of industry from the interior, and every ton on canals, rivers and lakes is required to bear the swelling wealth to the seaboard, to meet the external shipping demand. It is true, that railroads carry now considerable quantities, and may, in some localities, interfere with the tonnage of vessels; but, as a whole, their effect is probably to increase business for the shipping. There is one other point in the table, viz., that the cod and mackerel fisheries, the only directly protected interests among the whole, is the *only one that has diminished in magnitude.* Notwithstanding that that interest has been, annually, in receipt of direct bounties paid by the federal government, under the false plea of encouragement, they are the least prosperous of all. It may, doubtless, be discerned that a close affinity exists between their declining condition and their dependence on protection. How strongly they contrast with the whaling interest, which enjoys no protection, but after paying oppressive protective duties at home, goes forth into the Pacific, and drives all other nations from the business. So clearly and emphatically have they developed their superiority, that the English government abandoned the rivalry, and abolished the duties on oils. Under these circumstances, it may be considered, that whatsoever new channels may be opened to American enterprise, by modification of English laws, no American interest can suffer by allowing equally liberal concessions to the enterprise of the British. The fact is undenied and undeniable, that American ships are built of better materials, with better skill, and in better fashion, than those of any other nation; that both officers and men are as much superior to the English in intelligence, promptitude and activity, as the English undoubtedly are to the seamen of other nations; and these difficulties are by them to be overcome before they can hope to compete in an open field with the American mercantile marine. The first step toward this result will be the abolition of their navigation laws, their measurement laws, their timber duties and colonial regulations—all these are burdens, and absolute bars to British ascendency on the ocean, although they have, in protective slang, been called "encouragements." So long as no other nation could come up to the standard which Englishmen could reach, even when laboring with these clogs, the protectionists might allege that they were the cause of a superiority which they in fact only prevented from being more apparent; while, in the arrogance of her supposed ocean supremacy, and blind with the conceit of her legislative wisdom, to which she supposed the victories of Nelson were mainly owing, she looked with supreme contempt on the American marine; which, pursuing its own way, was undermining her power.

9. SHIPPING INTERESTS OF NEW ENGLAND.

The commercial writer of the "Atlas," in an article less courteous than is expected from a high toned paper, has endeavored to refute the position assumed by me, that the proposed change of the navigation laws of Great Britain would greatly benefit New England, inasmuch as, on equal terms, our navigation defies competition.

His only argument is contained in the following array of figures. The honesty and fairness of their application, and the truth of the inferences drawn, we shall proceed to examine.

The foreign entries of American and British vessels in our ports, were as follows:

	American.	British.
1830,	967,227	87,231
1835,	1,352,633	529,922
1840,	1,576,946	582,424
1844,	1,977,438	766,747
1847,	2,101,359	893,210

Thus, to quote the writer's words, "In 1830 the foreign tonnage entered in our ports, stood about one to eleven, and in 1847, nearly ONE to TWO."

It cannot be denied that the treaty formed with England during the administration of Gen. Jackson, gave to British ships great and undisputed advantages, bringing them in competition with us, in our cotton ports, on the most favorable terms.

Their West India colonies, looking to the mother country and North American provinces for supplies of goods and timber, furnished to the outward bound British ships, good freights, on the discharge of which they were within a few days sail of our southern ports. The cotton freight was, with them, rather as an auxiliary, than, as with us, the main object of the voyage; and in the summer season, when American ships are generally lying idle, the British ships have been earning good and high freights by carrying timber from the Provinces to England. The only wonder is, that, under such unequal terms, we could have stood the contest at all. How we have come out of it, it will be our effort to show, taking the eight years from 1837 to 1845, when peace prevailed over the world, and commerce was undisturbed, except by the fluctuations to which it is always liable.

The first attack to be made on the above-mentioned figures, will be to separate from that portion of the foreign tonnage which is connected with the trade between this country and Canada and New Brunswick—and which does not rightly come under the head of foreign commerce—a trade of immense value to this country, inasmuch as from us their supplies of various kinds are drawn, and their exports to us are of such a nature as not to come in collision with our production. Under this test the figures dwindle most perceptibly—one more such blow and we should have to apply the microscope to discover them.

The foreign clearances from the United States were:

	American tonnage.	British to N. Ame'n colonies.	British to G. B. and other possessions.
1837,	1,266,622	440,002	103,020
1840,	1,352,653	383,156	101,348
1842,	1,536,451	417,058	182,892
1845,	2,053,927	512,004	258,840

That is, from 1837 to 1845, the American foreign tonnage increased 787,305 tons. The English tonnage, loading at our ports, except the provincial trade, increased at the same time 155,820 tons, and this not to England alone, but to her possessions in every part of the world, into which, for the last fifteen years, the United States have been extending their commerce.

Notwithstanding the unequal terms under which our direct trade with England has labored, there entered the ports of the united kingdom of Great Britain from the United States:

	Br. Ships.	Tons.		American.	Tons.
1832,	289	91,787	1832,	651	231,280
1836,	227	82,453	1836,	601	251,021
1839,	194	92,482	1839,	784	357,417
1842,	267	121,773	1842,	867	426,857

A more convincing proof than the above figures, that the increase of English tonnage clearing from our ports has been employed in new avenues of commerce, and the utter inability of British ships to compete with American, could not well be offered.

In addition, it must be remembered that American ships carry twenty per cent. more, in proportion to their registered tonnage, than English ships, making the real difference of capacity much greater than the figures show. Allowing, for a moment, that we suffer from the competition with British ships, the consequence would be, that, under existing arrangements, their commerce must increase whilst ours diminishes. Let us see how facts support this supposition.

The registered tonnage of the United States was:

1830,	576,475 33
1834,	851,438 42
1840,	899,764 76
1844,	1,018,764 91
1845,	1,129,725 76

An increase most satisfactory to the ship owner.

The total tonnage of the United States, compared with Great Britain, stands thus:

1830,	American tonnage,	1,191,776	British,	2.531,819
1835,	"	1,824,940	"	2,783,761
1840,	"	2,180,764	"	3,311,538
1845,	"	2,417,002	"	3,637,311

This constant, steady increase of his country's wealth and power is most gratifying to an American.

In 1830, possessing less than one-half the tonnage of Great Britain, we find ourselves, in 1845, having two-thirds.

In 1844, the commercial navies of all the powers of Europe combined, except Great Britain, amounted to 3,216,459 tons. Great Britain and the United States united, possess nearly double the tonnage of all Europe, and well may they give to the world their maritime laws.

The foreign commerce of the United States, owing to the inability of other nations to compete with us, has always been carried on under the flag of our nation, in a greater proportion than that of either of the three great maritime powers. England herself, with all the restrictions that she has imposed upon the commerce of other nations, and in despite of all her efforts to secure to herself the carrying trade of the world, yields to the superior efficacy and economy of our marine.

An able French writer, Baron Dupin, recently published an elaborate essay, entitled "Comparison of the three principal Navies of the World;" British, United States of America and French. The tonnage carried under the National Flag, in comparison with a million of tonnage under a foreign flag, in the respective commerce of the great maritime power, stands thus:

	National Flag.	Foreign Flag.
Great Britain,	2,200,778	1,000,000
United States,	2,272,058	1,000,000
France,	610,258	1,000,000

So also in the commercial marine of the three nations, we find the weight transported by each man of the crew, to be greater by the American sailor than in either of the other two marines; considering the difference between the registered and true tonnage of our ships, the difference would be greater still.

The mean weight, carried forward, according to the same table, is as follows:

Great Britain,	18,053 kilogrammes.
The United States,	21,390 "
France,	10,218 "

The small amount of foreign goods exported from the United States, is a consequence of the restrictions now imposed on our commerce. A better argument could not be offered in support of this, than the figures of the "Atlas," and as such we commend it to the notice of those interested in the question. So great are the restrictions that, out of the large mass of goods annually imported into this country, the value of foreign productions exported, averages not over $6,000,000. The impossibility of obtaining British vessels, or if obtained, the exhorbitant freight always demanded, amounts to a prohibition. Rightly cherished, this might become an important branch of commerce; our seaports might be selected as the warehouses of the world. Nowhere can property be stored cheaper or safer.

The increase of foreign tonnage in our ports in 1847, and upon which so much stress has been laid, was not the effect of natural causes; neither can it have any weight as an argument, except with those ignorant of the circumstances attending that eventful year. Great Britain was in a state of starvation, and her ports thrown open to the ships of every nation. Our own fleet, large as it is, was not near large enough to supply the demand. Freights were so enormously high, as, in many instances, to equal the value of the ship. It is not marvelous that other nations should have flocked in and helped us to do that which we could not do single handed. With all the influx, American ship owners never reaped such a rich harvest as on that year, and it is doubtful if ever any branch of business yielded such large profits, within a limited period, as then accrued to the ship owner.

In regard to the coasting trade, we have never had or expressed but one opinion. It ought not, and will not, be surrendered by this country. Although we may allow the foreigner to live in our cities and settle upon the plains, yet, to take him into the bosoms of our families, is a boon that will never be granted. Under restrictions similar to those with which the coasting trade of England is offered, it can never be rendered available by British ships. The voyage of a ship entering this port from New Brunswick, with a cargo of lumber, part of which she would discharge here and fill up the vacancy on freight, though very fanciful on paper, would leave the balance on the wrong side of the sheet at the termination of the voyage.

The average freight from Boston to New Orleans is four cents per foot, which would give a ship of 600 tons, valued, at an average, at $30,000, about $1,800 per trip. From this is to be deducted stevedore hire, $300; $200 commissions; also, deductions are almost always made for goods damaged or lost; so numerous and miscellaneous are the parcels shipped from here to New Orleans, that this has become a heavy charge against the ship. Join to this the detention of the ship, and it will readily be seen that the amount left is too small to make it an object for foreign competition—so on her return, if to make a coastwise freight, the ship has to run to New Brunswick in ballast to take a fresh start. One must be entirely ignorant of the close economy with which our shipping interest is managed, to fear competition with such odds in our favor.

For years we have contended with the cheap built and cheap manned ships of the north of Europe, with ships that the writer in the "Atlas" confesses British ships cannot contend against, and with nations that have monopolized the British trade with the north of Europe. With us, the nations have had every advantage; a large and sure commerce ready at their hands, coming and going to and from our ports on perfect equality with our own ships, taking everything from us and giving nothing in return, with what result the following figures show:

	Entered our port in 1837.	Entered in 1845.
Hanseatic,	70,703 tons.	51,683 tons.
Danish,	16,107 "	4,363 "
Prussian,	19,825 "	3,279 "
Swedes,	25,660 "	38,670 "
Norwegians,	2,189 "	
	134,484 "	97,995 "

Our shipping interest has received less protection and less fostering aid from the action of government, than any branch of commerce. It has arrived, in a few years, to the strength and maturity of manhood, and nothing can impede its further progress.—*Boston Post.* LEWIS WHARF.

HOME MANUFACTURES.

1. PROGRESS IN SOUTHERN STATES.

Every month adds more and more to the interest which the southern and western States are feeling in the subject of domestic manufactures, especially in cotton goods, for which they enjoy such rare facilities. With the material upon the spot, with an abundance of water power, or with inexhaustible coal and iron fields, provisions without stint, and cheap labor, particularly that of the slave, which is always practicable, it will be strange if the South and West permit much longer their wealth to be drained away by northern manufacturers. We ask only for the natural state of things, and that will give to us every desired advantage. Throughout the States of South Carolina, Georgia and Alabama, mills are continually in construction, and the results have, in almost every instance, been most favorable to capital. Our neighbors in Mississippi have also been aroused. In Louisiana nothing has yet been done, although a gentleman in East Feliciana, whose address we will give if desired, writes us as follows: "All I want is a little loose capital, say five or six thousand dollars, to establish a factory here. Can you find, among any of your capitalists, a man of sufficient spirit to enter in the scheme with me? I have lumber and brick, will give my attention to the business, and furnish one-half of the capital, charging nothing for the land and using my own cotton crop in the manufacture. Negro operatives will be employed."

2. CANNELTON, INDIANA.

We have been publishing a number of papers relating to the manufacture of cotton, &c., on the Ohio river, and have called especial attention to Cannelton, in the State of Indiana, which is destined to become a great manufacturing town. The company are allowed a capital of $500,000, and are selling their stock in the southern States. Lots for individuals or companies are offered low. The place enjoys the following advantages:

1. Power ample, cheap and certain.
2. Cheap food.
3. Facilities of transporting men and material.
4. Nearness to the market to be supplied.
5. Healthy position.
6. Cheap building materials.
7. In a free State.—[So say the company, though we cannot see in what this advantage lies.—Ed.]

Twelve charters for manufacturing companies at Cannelton, have been obtained, two of which have already been organized, the first of ten thousand and the other of two thousand spindles. The first factory will be four stories high, two hundred and seventy-two feet long, sixty-five feet wide, and employ three hundred and seventy-five operatives. Among the stockholders, we observe the names of Mr. Morgan and Col. Maunsel White, of Louisiana. The Secretary of the Cannelton company is Henry A. Griswold, of Louisville, Kentucky.

The following list will show the progress which has been made by Georgia in the manufacture of cotton:

3. FACTORIES IN GEORGIA.

Planters',	Factory in	Upson	county.	Beaver Dam,	Factory in	Greene	con'ty.
Waynsman's,	do.	do.	do.	Anthony's Shoals,	do.	do	do.
Thomaston,	do.	do.	do.	Cedar Shoals,	do.	Newton	do.
Flint River,	do.	do.	do.	Newton,	do.	do.	do.
Columbus,	do.	Muscogee	do.	Roswell,	do.	Cobb	do.
Howard,	do.	do.	do.	Nickojack,	do.	do.	do.
Coweta,	do.	do.	do.	Rock mills,	do.	Warren	do.
Carter's,	do.	do.	do.	Shoals of Ogechee,	do.	do.	do.
Winter's,	do.	do.	do.	Sweet Water,	do.	Campbell	do.
Augusta,	do.	Richmond	do.	Milledgeville,	do.	Baldwin	do.
Bellview,	do.	do.	do.	Planters',	do.	Butts	do.
Richmond,	do.	do.	do.	Eatonton,	do.	Putnam	do.
Princeton,	do.	Clarke	do.	Troup,	do.	Troup	do.

Athens,	do.	do.	do.	McDonough,	do.	Henry	do.
Georgia,	do.	do.	do.	High Shoals,	do.	Morgan,	do.
Mars Hill,	do.	do.	do.	Bowen's,	do.	Carroll	do.
Scull Shoals,	do.	Greene	do.	Trion	do.	Chattooga	do.
Broad River,	do.	do.	do.	Houston,	do.	Houston	do.

In addition to the above, the requisite amount of stock has been subscribed for one factory in Macon, one in Augusta, one in Warren, one in Morgan, one in Gwinnette and one in Monroe. Others have, no doubt, been spoken of, with which we are unacquainted, and which may be in operation in the course of the present year.

4. We have seen a notice of the TRADEGAR IRON WORKS, at Richmond, Va., and learn that considerable supplies of machinery are sent from it to the sugar estates of Attakapas, La., which are preferred to those from the Cincinnati, Pittsburg, and other iron works. Mr. Anderson, the proprietor, is also extensively engaged in the manufacture of bar iron, locomotive and car axles, etc., etc. We commend this establishment to the South as worthy of our patronage and support.

In this connection we would observe, that at New Orleans we have the very successful foundery of Leeds, and the Belvidere works on the other side of the river. At Montgomery, Ala., we learn the establishment of a very large foundery for the repairs of steamers, &c., &c.

5. IRON FURNACES IN THE WEST.

There are, in Ohio and Kentucky, thirty-three iron furnaces, which yield an aggregate of 56,000 tons of pig metal each year. In addition to these furnaces in Ohio, there are a number in Tennessee and Illinois which yield a considerable amount of metal, and, with the increase of population in the West, this business is steadily advancing.

Much the largest portion of Ohio and Kentucky metal is disposed of in the Cincinnati market; and it is very seldom that the supply is more than adequate to the demand, or that the former is not about equal to the latter. In consequence of this, and of the article not being one of speculation, prices fluctuate but little, and the ruling rates have been about $26 for cold blast Tennessee and Illinois; $28 for do. Ohio and Kentucky, and $27 for hot blast do.

Of the 56,000 tons of metal produced in Ohio and Kentucky, it is estimated that 22,000 tons is consumed in Cincinnati, for which $600,000, or thereabouts, is annually paid. From this statement, some idea may be formed of the extent of the foundery business in Cincinnati. We shall have something to say on this subject at some future time.

We find in Cist's Advertiser a list of the Ohio and Kentucky furnaces, in 1849, which we append:

HOT BLAST.

Names,	*Owners.*	*Location,*
Buena Vista,	H. Means & Co.,	Castleburg,
Starr,	Lampton McCullough,	" [Ky.
Greenup,	Wilson, Scott & Co.,	Gallipolis, O.
Pennsylvania	W. M. Patton & Co.,	Greenupsb'g
Raccoon,	Hollister & Brothers,	" [Ky.
N. Hampsh'e,	Samuel Seaton,	"
Gallia,	Bently & Thompson,	Gallipolis, O.
Lagrange,	Iron and Coal Co.,	Hanging R'k
Vesuvius,	J. W. Dempsey & Co.,	"
Mt. Vernon,	Campbell, Ellison & Co.,	"
Lawrence,	Culbertson, Means & Co.,	"
Pine Grove,	R. Hamilton & Co.,	"
Union,	Sinton, Means & Co.,	"
Ohio,	do.	"
Junior,	Gliddou & Co.,	Franklin, O.
Empire,	do.	"
Center,	Hamilton, Rogers & Co.,	"
Franklin,	Gould, Hurd & Co.,	Franklin, O.
duckhorn,	Willard, James, & Co.	Wheelersb'g
Scioto,	Smith, Masner & Co.,	" [O.
Jackson,	Tewksbury, Adair & Co.,	"
Bloom,	McKinnell & Brothers,	"

COLD BLAST.

Names.	*Owners.*	*Location.*
Clinton,	W. Patterson & Co.,	Castleburg;
Mt. Savage,	R. M. Biggs,	" [Ky.
Bellefonte,	W. L. Poage & Co.,	Amanda, Ky
Amanda,	Paull & Wurts,	"
Caroline,	Steece, Paull & Wurts,	Greenupsb'g
Laurel,	Wurts & Brother,	"
Keystone,	Green, Griswold & Co.,	Gallipolis.
Hecla,	H. Blake,	Hang. Rock.
Etna,	Dempsey, Rogers & Co.,	"
Olive,	Campbell, Peters & Co.	Wheelersb'g
Clinton,	Glidden, Smith & Co.,	" [O.

6. MANUFACTURE OF PLANTATION SHOES.

The *Mississippian* publishes the following: We desire to see the experiment tried of manufacturing all our own negro brogans and common shoes. We are satisfied that it can be done, and a fair profit realized. It would not take long to convert a plantation force into a shoe factory, and the profits would be at least ten per cent. larger than they yield from the plantation. Let us see. We are indebted to the superintendent of the penitentiary for the following facts:

One hand can make four pair of negro brogans per day; ten hands forty pair, which at $1 12½ would be,		$45 00
Cost of materials, 60 cts. per pair, which, for forty pair, would be	$24 00	
Negro hire, 50 cts. per day, which, for ten hands, would be	5 00	
		29 00
Net profit per day on ten hands,		$16 00
One hand can make three pair of brogans for whites; ten hands thirty pair; which, at $1 25 per pair, would be		$37 50
Cost of materials 55 cts. per pair, which, for thirty pair, would be	$16 50	
Negro hire 50 cts. per day, which, for ten hands, would be	5 00	
		21 50
Net profit per day on ten hands,		$16 00

Seeing, then, from this statement, that the business might be made lucrative, it is entirely practicable to dispense with our northern supplies of negro brogans and coarse shoes for whites. The consumption of the articles of brogans, in Mississippi alone, must be at least 150,000 pair, and requires an expenditure of nearly $170,000. Why we should not avail ourselves of the benefit of this trade, it is impossible to say. We learn, from the Savannah *Georgian*, that a shoe factory has been started at Atlanta, which bids fair to rival Lynn, of Massachusetts. It is expected to turn out this year 68,000 pair. They will be made of Georgia hides, tanned with Georgia bark, and pegged with Georgia pegs.

We have plenty of the raw material. Fresh hides are preferable to the salted of South America, used so exclusively at the North. Any quantity of fresh hides may be purchased in Mississippi. The terra japanica can be cultivated; the sumach grows wild in abundance; the oak bark will be at our hand in the woods for generations to come; the valonia nut and cork tree bark, if needed, can be imported as cheaply into Mississippi as Massachusetts; and for all articles, the manufactured brogan could be exchanged at a profit. We are informed that with $1500 a very good tannery might be established. Certainly, under such circumstances, there can be no doubt of a handsome return on the investment, especially if connected with a shoe factory. Some enterprising citizen will take up this idea and make a fortune for himself.

7. STATISTICS OF SOUTHERN COTTON FACTORIES.

Mr. Solon Robinson, whom we have already quoted on another subject, gives the following as the result of his personal examination at the South:

The Graniteville Factory, in Edgefield District, S. C., 12 miles north of Hamburg, contains 9,245 spindles, and 300 looms, and all the machinery, of the very best kind and modern improvements, for making No. 14 sheetings and drillings. The building is of solid blue granite, 350 feet long and 50 feet wide, two stories high, with a good room in the attic, equal to half a floor, or more. The picker room is also stone, separate from main building, two stories high. Store houses, offices, two churches, a school house, 83 dwellings of wood, and all the fixings of the neatest kind, with two dams, and races a mile long, 40 feet head, two turbine wheels, a saw and grist mill, a hotel, and 9,000 acres of land, all cost $300,000, or $32.44 for each spindle. The mills in Lowell cost from $35 to $38 a spindle. A steam mill at Salem, Mass., cost $21 a spindle for 30,000 spindles, not including dwellings for operatives.

The details of cost at Graniteville are as follows:

Real estate,	$12,222.35
Canals and dams,	9,505.46
Factory buildings,	60,144.57
Water wheels and flumes,	6,949.12
Shafting and gearing,	12,663.99
Machinery,	121,754.03
Fire and steam apparatus,	5,947.65
Starting up mill, and furniture,	3,587.96
Saw mill, machine shop, &c.,	9,079.86
Cord clothing,	3,010.00
Dwelling houses,	43,293.18
Streets and fences,	1,998.80
Contingencies not yet carried to proper account,	3,307.49
Margin left for future expenditures,	6,539.67
Total,	$300,000.00

The building is warmed by steam pipes, as all should be.

There is a new factory at Augusta, Georgia, containing about the same amount of machinery, 208 feet long, 50 feet wide, and five stories high. The stairways of each are in projecting towers in front. Both of these are operated with white laborers, natives to the soil. These will consume ten bales a day, and turn out 10 to 12,000 yards of 30 and 36 inch sheetings and drillings. Cotton costs, now, 6¾ cents delivered. Average wages of all the men, women and children, at Graniteville, in April last, $3.05 a week. Most of work done by the piece. Number of hands, 300.

At Vaucluse, on the same stream, the number of hands, 94. Average wages through last year, $37.85 cents per day of 12 hours work. Number of spindles, 2,280, and 43 looms, making 8 ounce Osnaburg and bundle yarn. Hands employed, 11 men, 50 to 60 girls from 10 to 25 years, and balance boys from 12 to 20 years of age. Capital in the factory and buildings and land, counted at cost, on a second-hand purchase by General Jones, the present owner, $30,000, and floating capital, $20,000. The building is granite, 40 feet by 80, four stories high, with a room in roof equal to three-fourths of a story, and stairway in projecting tower. The picking room separate, 20 feet by 40. The machinery not of the most modern kind, as some of it has been in use 17 years. In 1848, the wheel run 283½ days, and used 367,404 lbs. of cotton, excluding waste, costing 6 cents 7.388 mills per pound, making $24,758.81, and made 71,615 lbs. of yarn that netted 14 cents per pound, and 295,789 lbs. of cloth, or 591,579¼ yards that netted 7 cents per yard. The details of cost of this was, for 6,895¼ days' picking, &c., $2,268.39, or 6.175 mills per pound.

		mills per lb.	
7,922	days' spinning,	6.933	$2,547.37
2,246	" spooling and warping,	1.406	415.98
1,450¼	" dressing,	2.132	630.24
569	" drawing in,	0.633	187.30
4,937¾	" weaving,	9.360	2,768.64
562	" trimming and baling,	1,164	344.34
1,114	" hanking and bundling yarn,	4.953	354.75
840¾	" machinist, watch, roller coverer, and all extra work,	1.559	572.90
	Making the cost of labor put upon cloth, to 2 cents 9.361 mills per lb., or 1 cent 4.681 mills per yard, and the cost of labor on yarn, 1 cent 9.62 mills per lb. to which add, as above, cost of cotton, and 743 gallons of oil, equal to 2.471 mills per lb. of cotton,		908.03
	Contingencies, which include materials, commissions, insurance upon $20,000, &c., and is equal to 1 cent 1.305 mills per lb. of cotton,		4,153.39
	Transportation on cotton yarn and cloth,	3.856	1,416.73
	73 barrels of flour for sizing, chargeable to cost of cloth,	1.092	323.20
	48 reams of paper, chargeable to cost of yarn,	1.156	82.80
	Interest on $50,000 capital, 7 per cent.,	9.526	3,500.00
	Net profits above all cost and interest, as above,		7,826.81

Total cost of cloth per lb., 12 cents 4.999 mills, or 6 cents 2.499 mills per yard. Total cost of yarn, 11 cents 5.322 mills per lb.

One-fourth of the cotton used was short staple Nankin, and made into striped Osnaburgs. All cloth 31 inches wide, 8 oz. to the yard. Average daily consumption of cotton, 1,398 lbs.

All the hands, except a few men who are unmarried, and all that can, work by the piece. Families all live in factory houses, rent free, and cultivate all the land they choose to fence. General Jones has been here nine years, and no case of fever among hands. The mill stopped a few days last year on account of pneumonia among the operatives. The General has tried both, and gives preference to white labor. At Saluda Factory, near Columbia, all operatives are black. DeKalb Factory, at Camden, has 1,680 spindles and 40 looms, 93 hands; two-thirds white and one-third black. Average, 1,200 lbs. of yarn and cloth a day, one-third yarn and two-thirds eight ounce Osnaburgs. Used last year, 353,681 lbs. cotton, and made 90,145 lbs. of yarn and 234,035 lbs. of cloth—running mill 288½ days of 11⅜ hours. Size of building, 125 feet by 29, four stories. Average wages of hired blacks, 18¾ cents a day. They board themselves. Wages of whites, 13 to 26 cents, and weavers by the piece—18 cents a cut of 33 yards, and average about 3 cuts a day. Weavers' wages of the last month, from $9.90 to $18 per week.

Marlborough Factory, near Bennetville, S. C., owned by Capt. M. Townsend, runs 1,000 spindles on coarse yarns, Nos. 5 to 10, with 35 hands from 10 years old up, averaging $1.90 a week, including 5 slaves, counted at $8 a month—consumes 500 bales a year, at 5 cents a pound, and made last year 162,500 lbs. yarn. Average value at home, 12½ cents per lb. Cost of production, in labor, 2½ to 2¾ cents per lb. Capital, $20,000 in mill, and $5,000 floating. Sells about a third of yarn at home, and balance in New York. Hands all work by the day and week, and included in average cost is a machinist now repairing, whose wages are $9 a week.

INTERNAL IMPROVEMENTS.

In our next number we expect to publish the full particulars of the Memphis, St. Louis and Holly Springs Conventions, which have, for their object, the extension of our enterprise both East and Westward. We continue, in this number, our paper on Plank Roads, and that on the St. Louis and Ohio Railroad.

1. TENNESSEE RAILROADS.

We should not be very much surprised, says the Mountain Eagle, to see a locomotive enter the State of Tennessee in the direction of Knoxville, before one penetrates in the direction of Nashville. We were up the line a short distance, a day or two ago, and were astonished at the forward state of the work. There are, at this time, a force of four hundred hands operating on the first sixteen miles of the road, as we learn from Mr. Prichard, the engineer in charge of the work. Gen. Green, the contractor of the road, passed through our town on Friday last, on his way North, to perfect some of his arrangements for the elevation of Dalton and the improvement of East Tennessee and North-western Georgia. We wish him the most abundant success. If he succeeds in effecting one-half of his plans—we do not mean to express a doubt of his success.—*Atlanta Intelligencer.*

2. ALABAMA RAILROADS.

The Mobile Register says: We have the pleasure of announcing that the Directors of this Company closed a contract yesterday, with Messrs. W. D. Ribdle & Co., for the construction of seventeen sections of the Mobile and Ohio Railroad: commencing at the Eight Mile Creek and extending to Cedar Bluff—a distance of twenty-six miles. The road is to be graded and timbered, and put in condition to receive the iron rails, at the cost of about $160,000.

3. MOBILE AND OHIO RAILROAD.—No. 3.*

SECOND.—*The Travel through, and Freight Transportation.*

No accurate account is kept of the number of passengers annually arriving by steamboats, in New Orleans, from points above the mouth of the Ohio River; we are, therefore, left to conjecture. From the best data we are able to procure, however, we believe that the aggregate of arrivals and departures will be found to exceed 40,000 per annum. The completion of the Mobile and Ohio Railroad will afford the traveler, destined for the Gulf, a choice between the two following routes:

	Distance.	Time.	Fare.
From Cairo to N. Orleans, by Steamboat,...	1,012 miles.	84 to 96 hours.	$15.00
" " to Mobile, by Railroad,........	470 "	24 "	10.00
Difference in favor of Mobile,........	542 "	60 to 72 "	$5.00

Or, if destined for New Orleans—

	Distance.	Time.	Fare.
By Railroad, from Cairo to Mobile...........	470 miles.	24 hours.	$10.00
By Steamboat, from Mobile to New Orleans,..	175 "	16 "	5.00
Total,............................	645 "	40 "	$15.00

Leaving a difference in favor of the route via Mobile of 367 miles in distance, and 44 to 56 hours in time, at the same rates of fare.

The Mobile and Ohio Railroad must, therefore, when finished, inevitably attract and monopolize the whole of this immense travel. Not only this, but thousands who are deterred from visiting the Gulf by the perils of Mississippi navigation, would avail themselves of the existence of railroad facilities, to enjoy the delightful winter climate of the tropics. The tide of travel between New York and the West Indies and Mexico, would tend more and more to the route of this road, as the different lines of railway now progressing north and east of Cincinnati should be completed. From these circumstances we hazard little in the assertion, that the number of passengers to be conveyed over the whole length of the Mobile and Ohio Railroad, would reach nearly 50,000 per annum.

Could this road compete profitably with the Mississippi River in the transportation of heavy freight? We answer in the affirmative. Fortunately the experience of the last fourteen years in railroad building, in the United States, affords ample material for our guidance, in entering upon new undertakings. We are no longer compelled to advance new theories, for the results of all previous experiments are before us. From these we can institute correct comparisons, and illustrate the advantages of particular routes. There are several railroad lines, in the United States, that come in direct competition with river routes, and some of these are sufficiently analogous to enable us to form a safe judgment, from their success, of the prospects of the Mobile and Ohio Railroad.

The Western Railroad, from Boston to Albany, furnishes a most striking example of the success of railroad competition against formidable odds. This road was opened in the fall of 1841, at a cost of over $8,500,000, and is 156 miles in length. It gives to produce reaching Albany, from the west, the choice of two markets: New York, 160 miles distant, without changing freight, by the "safest river navigation in the world;" or Boston, nearly the same distance by railroad, with the additional cost of removing the produce from canal boats to the cars. What has been the consequence? Witness the rapid and steady increase of the revenues upon this road since its completion, a large portion of which is from freights:—

Years.	Receipts.	Expenses.	Net Income.	Dividends.
1842..............	$512,688	$266,620	$246,068	....
1843..............	573,883	283,826	290,057	....
1844..............	753,753	314,074	439,679	3 per cent.
1845..............	813,480	370,621	442,859	5 "
1846 (11 months)...	878,417	412,679	465,738	6 "
1847..............	1,325,336	676,689	648,647	8 "
1848..............	....	....	725,000 prob'ly	....

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* Continued from October number.

Witness also, the effect of this road upon the growth of Boston, as compared with New York:

Population of New York in	1830...	203,007				
" "	1840...	312,710	Increase in	10 years	54 per cent.	
" "	1845...	371,102	"	5 "	18½	"
" Boston	1830...	61,392				
" "	1840...	85,000	"	10 "	37	"
" "	1845...	114,366	"	5 "	35	"

From this, we see that while the ratio of increase has declined in New York, since the completion for the Western Railroad, from 54 to 37 per cent. for ten years, the ratio of Boston has increased from 37 to 70 per cent. for the same period. The value of real and personal estate has increased, in the latter city, in like proportion:

Year.	Real Estate.	Personal.	Total.
1830..............	$36,963,000	$24,104,200	$61,067,200
1840..............	58,577,800	32,248,600	91,826,400
1845..............	81,991,400	53,957,300	135,948,700

This shows an advance in the ratio of 100 per cent., since 1840. It cannot be denied that this wonderful prosperity is chiefly owing to her railroad communication with the West. Notwithstanding the heavy cost of this work—equal to the sum required to construct the Mobile and Ohio Railroad, which is three times its length—it has yielded a fine profit from the beginning; and, as shown by the table, the stock is becoming more and more valuable every year.

The Georgia and South Carolina railroads afford further illustration, nearer home, of the value of similar enterprises, whether we regard them as objects for the investment of capital, or, in their higher bearings, as powerful agents in stimulating the growth and developing the natural resources of the regions through which they pass. At Augusta, as at Albany, we find a navigable river and a railroad competing for the transportation of the produce arriving there, and with like results. Although every bale of cotton shipped from Augusta by railroad to the seaboard pays a freight of one dollar and a heavy drayage tax, which is avoided by the boats, while the freight by the latter is only fifty cents per bale, we find that the South Carolina Railroad has proved the more successful competitor, and receives the largest share. Of the total amount of 134,302 bales of cotton received in Charleston by the railroad in 1847, 73,149 bales were from Hamburg and Augusta. About two-thirds of the receipts at the two places last named, now go forward by railroad to that city, and the tendency in that direction is annually increasing. Notwithstanding the quantity of cotton reaching Charleston by this road in 1847, was (owing to the short crop in Georgia and Carolina) 62,833 bales less than in 1846, the receipts of the Company were $66,494.05 greater than for that year, and the net revenue increased $72,722.78. Much of this gain was in up freights, destined for North and East Alabama; and, as we have before remarked, some portion of it for places immediately up the rivers emptying into Mobile Bay. Need we stronger proof of the fact that freight *will abandon* the water for land conveyance, whenever railroad facilities are offered? That northern capitalists are satisfied of this, is manifest from their readiness to invest a large amount in building a railroad parallel to the Hudson River, thus acknowledging the superiority of railroads over the most favorable circumstances of river navigation.

The length of the Mobile and Ohio Railroad will be about 470 miles. The distance from the mouth of the Ohio River to New Orleans by water is 1,012 miles. From a report of Thomas Allen, Esq., to the Chicago Convention of July, 1847, we obtain the actual cost of the trips of three steamers plying between St. Louis and New Orleans:

Steamer I——,	of 249	tons, run at an expense of	$143 50 per day.
" M——,	886	" " "	355 00 "
" W——,	498	" " "	325 00 "
Total,	1,633		$823 50

Estimating these three steamers with an aggregate tonnage of 1,633 tons, to convey, on an average, an aggregate of 1,800 tons cargo to New Orleans, at the cost of $823 50 per day, we should have for a trip of 4½ days (the usual time required between Cairo and New Orleans), a total of $3,705 75. Adding to this, for one day in port, loading and unloading, at, say half the running expenses, $411 75, would make the whole cost $4,117 50 for the trip. At a cost of 60 per ton, for building 1,633 tons, we have $97,980 as their value, which is below the average. This would give $16,330 per annum as the depreciation in value, supposing the steamers to last six years. Including these items, we should have as the cost of transporting 1,800 tons of freight to New Orleans by water—

Running expenses of the trip,	$4,117 50
Wear and tear of hulls, &c., &c.,	408 00
Insurance on do., one-half value,	50 00
Total	$4,575 50

Being, without fractions, $2 54 per ton. This approximation would require a considerable addition in practice, for the delays and accidents, loss of trips, &c., &c., to which steamers are liable on the Mississippi, and which it is impossible to estimate with any accuracy. Supposing, however, these causes to increase the cost one-fourth, the total would be $3 17 per ton.

The cost of transporting freight over the following railroads was, in 1847—

Georgia Railroad,	1,679	per ton per mile, and the average load drawn per engine,	38½ tons.
Baltimore & Ohio,	1,152	" " "	41¾ "
Western,	1,334	" " "	... "

Which includes "maintenance of way," and all other expenses incident to these roads. On the two former, owing to imperfect construction, and the use of the flat rail on the earlier portions of the route, the annual cost of repairs is unusually large. If we deduct this excess, and, on the Baltimore and Ohio Railroad, the expensive charge for horse power with which it is burdened, we shall have for that road a cost per ton per mile of 0.947, in trains of 41¾ tons per engine. On that, as well as on the Western Railroad, grades of over eighty feet to the mile are used, while we are assured by Mr. Troost, that the grade of the Mobile and Ohio road need nowhere exceed forty feet to the mile. Assuming that an engine of the second class would draw a load of fifty tons net freight, over a grade of eighty feet to the mile, without difficulty, one of the same power would move ninety tons over a grade of forty feet with ease; and an engine of the first class would pull one hundred and thirty-five tons over the same grade, with like facility.

Let us suppose for a moment that the Mobile and Ohio Railroad is completed. Applying the advantages which it will possess over the roads before mentioned, in its straight line and easy grades; and assuming ninety tons as the average freight drawn per engine, we have as the cost of transporting one ton from the mouth of the Ohio River to Mobile, at .442 per mile, omitting decimals, $2 03 per ton. Or, if the ratio per mile be one-half greater than the above, owing to increase of tonnage, we should have .663, or $3 12 per ton. This estimate, which is about half the actual cost of freight transportation on the Western Railroad, will not, we are convinced, be found too low.

It is contended by many, that, as freight destined for the Gulf must be brought from the Upper Mississippi and Ohio by steamboats to the northern terminus, when once aboard it would remain there, and float on to New Orleans, in preference to stopping half way, to be transported by railroad cars. That the railroad would intercept all such freights, we do not, of course, assert. That it would divert a large portion, enough to make it one of the most profitable roads in the Union, we firmly believe. But what is the case at present?

The number of steamboat arrivals into the port of St. Louis for 1846, was, as we gather from published statistics—

From Illinois River	446
" Upper Mississippi	663
" Missouri	256
	1,365

These steamers were of light draught, and terminated their voyages at St. Louis. At this point they deposited their cargoes, and received return freights.

The arrivals from New Orleans for the same year, were 395 steamers of larger tonnage, that likewise loaded and discharged their cargoes at St. Louis. The down cargoes of these 395 steamers were mostly made up of produce, &c., brought into St. Louis from above by the smaller craft before mentioned. Thus, we see that the largest share of Upper Mississippi freight passing Columbus, Kentucky, to and from New Orleans, is transhipped once at St. Louis. This city being only 170 miles above, it will be easy, when the railroad is completed, to transfer the shipping point, and extend the trips of these light draft steamers to Columbus. So with regard to the Ohio. Navigation is frequently interrupted above the mouth for the larger class of boats, and much freight passing that river is transferred from one boat to another, before reaching its destination. The construction of this road would result in the formation of steamboat lines, connecting with all important points above on the two rivers; and these, ere long, would in turn give place to tributary railways, uniting St. Louis, Cincinnati, and other chief cities of the West, to the Gulf by an unbroken chain.

The Georgia Railroad transports grain 171 miles for 8 cents per bushel, and merchandise at an average of 25 cents per 100 pounds; which yields a profit of 9 per cent. on the investment, besides paying interest on a considerable debt.

The usual freight charges between St. Louis and New Orleans, by water, are about 12½ cents per bushel, on corn and grain; for flour, pork, &c., 40@50 cents per barrel; and from 20@25 cents per 100 pounds on merchandise shipped by weight.

The total exports of eight leading articles of Western products, from New Orleans, for the year ending August 31, 1847, were as follows:

Flour. Bbls.	Pork. Bbls.	Bacon. Hhds.	Lard. Kegs.	Beef. Bbls.	Load. Pigs.	Whisky. Bbls.	Corn. Sacks.
1,319,500	230,520	25,904	907,977	51,996	624,958	63,259	2,520,813

Allowing that only one-fourth of the above products would be transferred from the river to the railroad, we should have from this source—

Flour.	Pork.	Bacon.	Lard.	Beef.	Lead.	Whisky.	Corn.
329,875	57,630	6,476	226,994	12,999	156,964	15,815	630,203

4. PLANK ROADS.—No. 1.

[This subject, so interesting to the Southern and South-western States, we are anxious to present fully before our readers in this and the three or four following numbers of the Review. The material before us is abundant. When at Memphis, in July last, we learned that a contract had been made for a plank road from that city to Holly Springs, and that great advantages were expected from it. The following is from the *Macon Messenger*, and will be continued.—Ed.]

Messrs. Editors—I observe that in the last number of the Journal & Messenger you have prepared your readers to receive something from me on the subject of plank roads. I fear you have led them to anticipate too much. All the information in my possession, worth adding to the general stock already in possession of the public, will occupy but little space in your columns, and may fall far short, in interest, of the anticipations you have excited. Such as it is, I give it with the more pleasure, as it is the result of my personal examination and inquiry into the subject at those points where the system has been more extended in this country—I allude to the State of New York, and particularly to the city of Utica, and other cities and towns in that region.

Plank roads are, at the present time, claiming a large share of the public attention, especially at the North and West. Though we have, as yet, no examples of this description of improvement in Georgia, we may safely predict that a people who have expended twelve millions of dollars in as many years, who have six hundred miles of railroad in actual operation, and who are pressing other and equally important improvements to a speedy completion, will not be found far behind in this general movement. The face of the country is so favorable to the construction of these roads—timber is so abundant—can be afforded so cheaply and conveniently, and of such superior quality, that the attempt to construct this class of improvements will be made, as a matter of course. Though I may not be able, therefore, to add much to the general stock of information; and though I cannot undertake the production of an elaborate essay on the subject, it will give me pleasure to give others the results of my observation and examination of the system, as I found it in practical operation.

Plank roads were first used in Russia, and were introduced into Canada by Lord Sydenham, while Governor of the Provinces. In the last nine years, upward of five hundred miles of these roads have been constructed. They are there laid with white or soft pine, a material, apparently, very indifferently adapted to the purpose.

From Canada, they were introduced into the United States, and the first road built in New York, was that from Syracuse to Central Square, which went into operation in July, 1846. The success which attended this enterprise led to the rapid extension of the system, until it is now stated that there are in operation and in progress upward of one hundred plank roads; and new companies are constantly forming under the general Plank Road Law, a copy of which I herewith submit for your examination.

A few of the roads in operation and commenced are the following—though I do not pretend to very great accuracy in giving their lengths:

Syracuse to Central Square	17 miles.	Little Falls to Newport	10 miles.
Utica to Rome	15 “	Schenectady to Saratoga	21 “
“ to Bridgewater	18 “	Rome to Turin	20 “
“ to Sherborne	40 “	“ to Pulaski	“
“ to Waterville	23 “	Oswego to Syracuse	“
“ to Mohawk	13 “	“ to Sterling	“
Ilion to Unadella Forks	“	“ to Hastings	“
“ to Cedarville	8 “	“ to Hannibal	“

From Oswego to Rome, and from Oswego to Syracuse by way of Central Square, are the longest roads yet constructed; several short roads act as feeders to these, one or two of which have been mentioned above.

It is rather a curious fact, and well worth mentioning, that three or four of the roads above mentioned are between points already connected by railroads, and some of them also by canals; which certainly would appear to afford every desirable facility in the way of transportation—the railroads affording speed and comfort to the traveler, and the canals furnishing transportation at low rates of charge. But there appear to be certain circumstances and seasons of the year, when, with good roads to travel upon, the farmer prefers to place his produce upon his wagon, and if the distance is not too great, to drive to market and to become his own agent or factor; and more especially, if he is in the least removed from the canal or railroad. This may be more strikingly the case at the North than here, as the long suspension of field operations, from the duration and severity of the cold, makes an occasional trip to market rather a recreation to the farmer or his sons than otherwise; and I have no doubt, that within moderate distances, and with the facilities of plank roads, the result would be the same at the South, to a considerable extent.

The road from Schenectady to Saratoga is of this description, running parallel and adjacent to the Schenectady and Saratoga railroad; and a line of stages is at this moment running upon the plank road in opposition to the railroad. It is true, that, in this case, the railroad is in such bad order as to deter many persons from traveling upon it. This plank road is not complete, but is, nevertheless, carrying persons through (distance twenty-one miles) for fifty cents.

The proprietor of the line of stages on this road informed me that the result of his experience in staging on plank roads was, that a team of horses would perform nine miles on hour, including stops, or ten miles traveling time, with the same ease to themselves that they could perform six miles on a good summer road. He further stated, that, in his opinion, there was no description of road on which a horse traveled with as much ease to himself as on plank roads, adding, that there was a slight elasticity which was highly favorable to the motion and ease of the horse.

I discovered, however, a difference of opinion on this subject; others maintained, with less show of reason, it appeared to me, that plank roads, instead of being elastic, were more rigid than common earth, gravel, or even macadamized roads, and that by long use upon a plank road, a horse lost his own elasticity of limb, and became stiffened. But if this latter effect ever takes place, I venture the opinion that it is rather the result of the high speed at which they are too fre-

Gulf of Mexico," extracts from which we design publishing in the Review. The editor's paper on "Provincialisms" is exceedingly good. Without approving the views of Skinner's *Plough, Loom and Anvil*, we repeat what we have often said, it is a zealous advocate of the cause espoused, and deserves favor with a very large and influential class. We commend the *Law Reporter*, as a cheap and valuable journal—$3 per annum.

23. *Annual Report Mercantile Library Association.* Boston. 1849.

24. *Greenville Rail Road Company Report.* 1849. The *Boston Mercantile Society* has 1145 members, has added 579 volumes to its library last year, and which reaches 5819 volumes. Its invested funds are $16,000 in amount. Among the list of periodicals in its Reading Room, we do not see our Commercial Review, which is the only want of taste we can discern in the Society's proceedings!! This is fame—though, by the way, we notice our Review in the Catalogues of most public Libraries in the Union. We thank Judge O'Neil for a copy of his Report, as President of the Greenville Rail Road Company, and will hereafter draw upon his statistics. The Judge's admirable paper on *Slave Laws in Carolina* had been misplaced but has come to hand, and its publication will be continued in the Review.

25. *A few Thoughts on the Foreign Policy of the United States*, by W. H. Trescot, Charleston. 1849.

26. *Oration before the 4th July Association of Charleston*, by W. Porcher Miles. 1849.

We have perused with liveliest interest these pamphlets. The authors were college mates with us, and the reminiscences of *alma mater* cling around them. They were ever distinguished in every effort of letters or oratory. *Alma mater* claims them with pride. We share a part of that pride. In matters of logic, metaphysics and pure reason, Trescot ranked highest. In eloquence, imagination, poetry—what the world calls "genius"—the palm was Miles's. Both of these gentlemen have, we regret, of late, appeared too little in public. It is the glory of Carolina to have many such sons.

But to the pamphlets. "*Thoughts on the Foreign Policy of the United States*" are in the spirit of elevated statesmanship and sound diplomacy. The style is peculiarly adapted to the subject, and is defaced by no tinsel ornament. We have noted occasional obscurities, and some passages which can scarcely be defended on critical canons. But for this we have not time. The ideas are good. In some respects they are new. Our complaint would be that the author stops short of the legitimate conclusions to which his reasonings tend. Perhaps he was staggered by them. It *is* true that the United States have passed the ordeal of national *minority*, and have become of *age* for all purposes whatever. What Mr. Lyell, in his travels in our country, says a young officer desired a war with England to prove, viz., that we are a *first class power*, is already proved and admitted. We belong to the family of nations, and have a voice in everything, and a potential voice, that concerns their polity. We have out-grown Gen. Washington's *keep-at-home* doctrine. Mr. Trescot has not succeeded in defining the cases in which we should and should not interfere in European politics. The truth is, there is no line, and we shall soon discover that we have more to do with Mr. Guizot's "Balance of Power" doctrines than we had flattered ourselves. If the Republic had intended her *Chinese* policy perpetual, she ought to have never bartered with Napoleon for Louisiana! With that accession began her growth, her ambition, in some respects her arrogance. She has gone too far now to stop or retreat. She sets up a *guardian* tenure to all North America on grounds of national defense. Is it of no importance to her liberties and her defenses whether all Europe be Republican or Cossack? The time has passed—the iron age is gone—glory, and power, and conquest have succeeded! Mr. Trescot is right about Cuba. If we annex her, we must have Jamaica and Hayti, etc. He is wrong when he supposes her independent national existence possible. Small Republics cannot exist in the vicinity of great ones. As a Louisianian, we desire no annexation of the Island. Upon the whole Mr. Trescot is a bold thinker, and, we believe, for the first time, on the right side.

Mr. Miles's Oration is a finished rhetorical production. In style it is nearly faultless. Its sentiments are elevated, dignified and patriotic. There are passages of fine eloquence. His portraiture of *public opinion* and its irresistible might, is graphic. We admire him for his indignant and noble repudiation of the *utility* doctrine of those who would tolerate the *Wilmot Proviso*. We admire him for the chivalrous sentiments of his conclusion—"Will you allow this stab to be made at the great principle of Constitutional liberty, for which our fathers struggled so hard for eight long years, and not throw your whole moral weight and guard before it. Or is that principle no longer as dear to us as it was to the men of the revolution? Or, in this utilitarian age, is all principle to be sneered at as a 'metaphysical abstraction,' and the profoundest question in politics and constitutional law to be settled solely on the basis of dollars and cents? If so let us pause and reflect, for all our institutions, our liberties, nay, our very existence, are endangered."

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THE
COMMERCIAL REVIEW.

Vol. VII, Old Series. DECEMBER, 1849. Vol. I, No. VI, N. S.

ART. I.—PROGRESS OF THE REPUBLIC.

EARLY SETTLEMENT OF THE COLONIES; HISTORICAL NOTES OF THE GROWTH OF TERRITORIES AND STATES; DISCUSSION OF GREAT BOUNDARY QUESTIONS; ACCESSIONS OF NEW TERRITORY AND THE PRINCIPLE INVOLVED; PRESENT EXTENT OF THE AMERICAN UNION AND ITS DANGERS, ETC.

The definitive treaty of peace settled between the United States and Great Britain, in 1783, determined the boundaries of the two powers in North America. The Mississippi, from a point west of the Lake of the Woods and southward to the 31° of latitude—that parallel of latitude and lines drawn upon the rivers Apalachicola, Flint, St. Marys, etc., constituted the boundaries of the French and Spanish possessions on the West and South;* and the North the St. Croix, the St. Lawrence, etc. rivers, and the lakes, separated from the Canadas.

The territory embraced within these lines was all that the original thirteen States occupied or claimed, and it was secured to them forever in the same treaty which secured their independence.

It will be not without interest to mark in a hurried manner the progress and extension of settlements and government in these original States, since from them as a starting point the most interesting contrasts may afterward be made. These States were the great pioneers of the Union, and out of them and such additional acquisitions of territory as they have been enabled to make from foreign powers, have been created a great body politic which has amazed the world by its extent and power.

VIRGINIA.—The year 1607 witnessed the first permanent settlement of any English colony throughout all this vast and then howling region. Under a patent from King James, one hundred emigrants, in April of this year, landed in the vicinities of James river and set about the construction of the town which adopts that name. In 1612, the Virginia company received an additional grant of territory, which included the Bermudas and all islands within three hundred leagues of the coast.

MASSACHUSETTS.—In 1620, the Mayflower, so celebrated in history for the daring band of spirits who were assembled in her cabin, landed in the proximity of Cape Cod. and, after "solemn prayer and thanksgiving," forty-one in number, excluding women and children, signed an instrument of government. The contract with the names of its subscribers is now preserved in Morton's "New England Memorial."

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* See Treaty in 2 Holmes's An., 529.

A patent was signed the same year, which was the basis of all subsequent ones in this region. granting to the Duke of Lennox and his associates, the right of planting, ruling. ordering and governing New England in America. The grant included all territories between the latitudes 40° and 48° north from ocean to ocean.

In 1620 was granted to John Mason the territory about the river Pascatagua and now comprised within the State of *New Hampshire*. This territory was included within Massachusetts until 1680, when it was formed into a separate government, much, it is said, against the will of the inhabitants.* The next question of boundary between the two governments was settled in 1740 by the Lords of Council in England.

The original patent for *Connecticut* was signed in 1631, and two years afterward the first house was erected there by some adventurers from Plymouth, in defiance of the menaces of a Dutch fort upon the Connecticut river.†

John Clark and others, eighteen in number, disgusted with religious differences in Massachusetts, purchased a small island from the natives, which afterward came to be known as *Rhode Island*. The fertility of the soil and the pleasantness of the climate soon attracted many people to their settlement.

In 1609, Henry Hudson, an Englishman, in the service of the Dutch, following the track of the Cabots a century before, landed on Manhattan Island. Fifty-five years after, the Dutch colony which had made a settlement here formally surrendered to an English fleet under Nicolls, and the name of New Amsterdam, in honor of the brother of the king. yielded to that of *New York*.

The Duke of York conveyed, in 1664, a part of the patent granted him by Charles II to Lord Berkely and Sir George Cartaret, under the title of *New Jersey*—the family of the latter being from the Isle of Jersey. In ignorance of this, Gov. Nicolls, of New York, granted, in the same year, a patent for the same tract—and under it the territory became a resort for reputable farmers and families from New England and Long Island.

In 1640 a purchase was made on behalf of New Haven, from the Indians, of certain territory on both sides of the river and bay of *Delaware*, for the purposes of trade and "extension of the Gospel." Fifty families were immediately settled. The Dutch, of New Netherlands, at first opposed this measure as an encroachment, burnt the trading house that had been erected and seized upon the goods.

Lord Baltimore, received from King Charles, in 1632, a title to the province of *Maryland*, named in honor of Henrietta *Maria* his queen. Two years after, Calvert, with a colony of two-hundred Roman catholics, arrived in the territory and fixed a settlement.

In 1662, the Earl of Clarendon and others, received a grant of the immense territory lying to the southward of Virginia, between the

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* Belknap's New Hampshire. † Trumbull's Connecticut, 13.

31° and 36° latitude, which in honor of the king was called *Carolina.* The first colony under the charter came over in 1667 or 1668.

William Penn, the celebrated "Quaker King," was constituted by the charter of Charles II. absolute proprietor of the province of *Pennsylvania.* He immediately proceeded to dispose of shares and a colony at once came over and settled above the confluence of the Schuylkill and the Delaware.*

The parliament of England having purchased the proprietory government of Carolina, divided, in 1729, the territory into two distinct and separate governments, known afterwars as *North* and *South Carolina.*†

To the southward of these colonies a large territory remained still unsettled, which caused some uneasiness in England, lest the Spanish, from the neighboring province of Florida, or the French from the Mississippi, in the desire of more easy communication with their West India possessions, should seize upon and appropriate it. A great movement of philanthropy was also at work at the same time in England. A double purpose of patriotism and philanthropy it was thought would be subserved by settling this region, viz., "to obtain possession of an extensive tract of country, to strengthen the province of Carolina, to rescue numerous people in Great Britain and Ireland from the miseries of poverty, to open an asylum for persecuted and oppressed Protestants in different parts of Europe, and to attempt the conversion and civilization of the natives." The government was vested in trustees. In 1733, Oglethorpe reached the limits of *Georgia,* so called in compliment to the king, with one hundred and sixteen persons intended for a settlement.

Thus in a period of one hundred and twenty-four years from the landing on James river to the enterprise of Oglethorpe, was effected the planting and colonization of those thirteen original commonwealths, which were destined in so short a period to shake off the foreign dominion which was asserted and maintained over them, and by a series of unparalleled victories over the troops of one of the proudest and most potent empires in the world, establish for ever their right of independence and place among the nations of the earth.

The territory held within the jurisdiction of these thirteen States, after the revolution, embraced vast, uninhabited and almost unexplored regions, stretching far beyond the mountains and lakes and the outermost limits of civilization and government. Each of the States holding such territory succeeded of course to all the rights of empire and sovereignty over it as fully and effectually as these rights had existed in the hands of the English king himself. There was nothing in the union of the colonies for whatever purpose to impair that right. Pending the adoption of the articles of confederation however, when it was of the last importance that the States should present an undivided front against the common enemy, Maryland refused her adhesion to the "*articles,*" unless an amendment were made appropriating the uncultivated and unpatented lands in the western part of the Union as a common fund to defray the expenses of the war.‡

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* Proud, 170–196.

† English Statutes, v. 708–714. Holmes's American Annals, i, 553; ii, 1.

‡ Kent, i, 210. Journals of Congress, vii. Congress, by acts of 1780, called **for these cessions by the States.—Kent, i, 259.**

We then discover at how early a period it was perceived, that if any one government, consolidated or federal, succeeded that of Great Britain throughout her American possessions, this government was the only proper repository of all rights to unoccupied territories, either then existing in the hands of its members or to be acquired by future treaty regulations with the Indians or with foreign powers.

It is certain that New York, soon after the proposition of Maryland, admitted the importance of the principle, and led the way in ceding her territories to the Union by the acts of her legislature in 1779 and 1780 and the final transfer of 1781. She was followed in 1784 by Virginia, in 1785 by Massachusetts, in 1786 by Connecticut, and in 1787 by South Carolina. North Carolina and Georgia made similar concessions.

On the adoption of the federal constitution in 1789, the right of Congress over all this territory was distinctly specified in the third section of the fourth article: "Congress shall have power to dispose of, and make all needful rules and regulations respecting, the territory and other property belonging to the United States."*

Two years before the institution of the present *constitutional* government, 1787, Congress passed an "ordinance for the government of the territory north-west of the river Ohio," which had been relinquished by the States of Virginia, Massachusetts, Connecticut and New York.

As early as 1769, Daniel Boone had plunged into the wilderness west of Virginia and begun the settlement of what was afterward known as the district of *Kentucky*. In 1790, having fulfilled the requisite conditions, this district applied for admission into the Union, and was received as an independent State the following year, constituting the first of the new class of States into which the Union is divided, subsequent in origin to the revolution, and the constitution.

A few days afterward *Vermont*, embracing the territory which had been included in the New Hampshire grant, but which had declared itself independent, by the name of New Connecticut, alias Vermont, and settled its disputes with New York claiming once a jurisdiction within its borders, petitioned for admission into the Union and was received as another independent State.

The jurisdiction of North Carolina having been extended over the district of *Tennessee* during the revolution, emigration flocked in that direction, and by 1796 the material existed for a State, which was formally admitted into the Union.

Ohio, included within the North-West Territory, which had been penetrated by Col. Clarke and the Virginians in 1779 and which begun to be settled in 1788, became one of the American States in 1802, and settled its constitution.

These States were all carved out of the original territories to which our country succeeded by the treaty of peace in 1784, and the possession of which was guaranteed and defined by that treaty.

About this period began a new era in the progress of America, the importance and influences of which cannot be held in too serious a light. From the opening of the revolution, or for about twenty-six years, the States had been content to grow and extend within the limits assigned by the mother country. These limits were vast enough for the proudest empire. It was impossible, however, that a people who had possessed themselves of this much could remain satisfied whilst fertile and still more extensive regions surrounded them upon every hand, claimed and sparsely populated by nations entertaining little if any sympathies with them. The restless enterprise too and acquisitiveness which are inherent in all republics, were not likely to operate with a diminished force here. It is, perhaps, too early to determine whether this desire of extensive territory,which dating from the early part of the present century, has been growing every year more intense with our countrymen, will be, in the event, for the advantage or detriment of the republic. Guided and restrained by high moral considerations and political wisdom, it has hitherto, as we believe, so far as the results have been manifested, been subservient to the true interest of the country. There is a mean, however, which can easily be transcended, and perhaps that mean has been already reached. Territory may be purchased at too dear a cost, when it is unnecessary, or when, even if necessary, the rights of others must be invaded and protracted wars undertaken. Will past moderation content our government in the future; or will it, emboldened and stimulated by success, aim for new accretions of sovereignty each year, from newly acquired soil, in the mere wantonness of dominion? We confess that, from the spirit extensively manifested, and the doctrines promulgated in high quarters, in regard to the wonderful elasticity and expansiveness of our Union, and its capacity for indefinite extension, some apprehensions may arise in this particular. It is not difficult to predict where such a state of things would end. Peace is the mission of republicanism, and this is inconsistent with such a spirit. Territorial aggrandizement cannot long be conducted by any one nation without provoking uneasiness and animosities upon the part of others. War is almost a natural concomitant; and with continued wars comes the dangers of military despotism, growing out of the extraordinary adulation and deference everywhere accorded to a successful general.

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* As to the new States' power over their lands.—Kent, i, 259.

But supposing peace were rigorously preserved,and neighboring States, impressed with the beauties of our system, were to become solicitous of merging a portion of their sovereignty and of sharing a part of our greatness; ought it not to be our principle, in the liberal spirit, as it is said of freedom, like that of Christianity, to receive them into the fold, like younger brothers in manhood and republicanism? I know that there is something attractive in this manner of presenting the case, and that ardent and enthusiastic natures are prone to be hurried away with it. But there are higher considerations than those of mere feeling. Have we not duties toward ourselves higher than those which relate to the world at large? Our own salvation should be the first and the last consideration. Mere territory and mere numerical force is nothing to a nation. We may degrade, by continued annexations, the anglo-Saxon element which has been the moving influence of the republic in all its history, by introducing to the full and unrestricted rights and privileges of republicanism and liberty, races and people who not only have not been tutored in these institutions for several hundred years as we have, but in reality have been plunged in the lowest depths of ignorance, bigotry and political slavery. Such repeated accessions can only pave the way for the ruin of the republic.

Though our federated system be beautiful and an improvement upon any of the previous forms of free governments, yet we cannot but think the limits of safe extension, though ever so well guarded, are not as wide as many imagine. The remote States will cease to have their proper influence, and such will come to be the diversity of interests almost irreconcilable, that almost any uniform legislation will become unequal. The boundaries of State and federal powers cannot be so well observed where the number of States becomes very great. The doctrines of States' rights too, which have been reserved to them by the constitution, are much more in danger of perishing when there are many than a few States. These doctrines are much more strictly held by the original thirteen States than by any of the new ones; and the reason is, that the one class consider themselves the *creators* and the others the *offspring* of the constitution. The extension of *federation* naturally leads to *consolidation*, after a certain point is passed. A strong government, as it is called, will become absolutely necessary, to keep within their orbits fifty or a hundred commonwealths scattered over the continent, for example, from Hudson's Bay to the South Seas. What is true for the extreme case will be true for some intermediate one. A vast consolidated government can only become a *despotism*—since it must legislate for interests too remote to be understood or to excite any regard.

If the choice of the two conditions, an *indefinite* territorial extension of the republic, or the limits with which it was received from Great Britain in 1783, were given, though up to the present moment no little of our national glory and progress has been derived from these extensions, we would unconditionally and without hesitation choose the least of the two evils and elect that our country should for ever be restricted within its limits at the period of the constitution. Within these bounds, even then, she could maintain rank as one of the first powers on earth.

The population of the United States had no sooner spread beyond the mountains and into the North-Western territory, than it was perceived, some natural and convenient outlet to the ocean was demanded for their productions. The Mississippi receiving in tributaries many important American rivers, might be considered as commanding their commerce; and this "inland sea," being held in common with a foreign power, claiming an exclusive jurisdiction over portions of it contiguous to the city of New Orleans, naturally excited the greatest uneasiness. The danger of the concession we were about to make during the revolution, when solicitous of a Spanish alliance, of the exclusive navigation of the Mississippi to Spain,* because most clearly perceived and acknowledged. The Spaniards after the treaty of peace resisted with the Americans the free navigation of the river; but, on the trading expedition of General Wilkinson reaching New Orleans in 1787, they were disposed, in the hope of effecting a disunion, to offer this boon to the States westward of the mountains, on the condition of their instituting a separate empire.† In 1795, the treaty of St. Lorenzo, conceded the freedom of the river to the United States, and of the city of New Orleans, for ten years, as a depot for its produce. In the difficulties which immediately ensued upon the treaty, and the manifest hostility of Spain toward the United States, the Americans perceived the iminent danger of their position and the almost essential necessity of possessing an entire control of the river, throughout all its course to the sea. The French, too, in the policy of Bonaparte, were solicitous of regaining the extensive empire of Louisiana, which, in an unhappy moment, they had ceded to Spain. He succeeded in obtaining a recession, which excited even more lively apprehensions in our country. The whole West was in one flame: "If Congress refuses us effectual protection," was the strong language, "we shall adopt the measures which our safety requires. No protection, no allegiance!" Mr. Monroe was dispatched to Paris, with a view of immediate negotiations in the matter, and Mr. Rost, of Pennsylvania, went so far as to move in the Senate, that five millions of dollars and fifty thousand men be appropriated for the conquest of Louisiana. The negotiations of Mr. Monroe were successful, and the purchase of Louisiana effected for sixty millions of francs and the assumption of certain claims due on the part of France to American citizens.

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* Marbois. † Com. Review, i, 403, vol. vii, No. 3.

Thus was acquired, peaceably, the right to an almost boundless territory, whose value Napoleon considered, according to Marbois, incalculable. Out of this territory, we shall directly see, some of the most important States in the Union have been carved.

The purchase does not appear to have been premeditated or even desired. The instructions of Mr. Madison, Secretary of State, to the American Commissioners, related entirely to the island of New Orleans and the Floridas; the first of which was estimated at four times the value of the second, and West Florida as double that of East Florida. The Commissioners announced their inability to treat beyond these, but discovered very soon that such a limitation would prevent the possibility of a negociation. The policy of Napoleon was to secure the whole of Louisiana from falling into the hands of Great Britain; and this he now effected in defiance of the remonstrances of Spain, who had reserved a right of preëmption in the territory.*

In regard to the boundaries of this extensive region, everything remained in doubt and the greatest uncertainty. The Spaniards had even denied, in 1780, the extention of any American territory as far westward as the Mississippi; though the treaty of 1763, between Spain and Great Britain, was quoted with great effect against the pretention. They now sought, by every means, to restrain the limits of Louisiana. The United States claimed the river Perdido, on the east, and the Rio del Norte, on the west, as the boundaries of the Province when in the hands of France, and previous to the cession to Spain. The parties came to an immediate issue in the matter; and Spain instituted the government of Baton Rouge over the territory (about 156 miles in length and 50 in breadth) embraced between the Mississippi and Pearl rivers, which was retained by her until the inhabitants, in 1810, renounced the dominion of that power, and claimed the protection of the United States.

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* In Story's Commentaries are given the grounds of opposition in Congress against the treaty.

We shall see hereafter, that a final settlement of all these disputes was not made until the year 1819.*

The province of *Louisiana* was now divided into two sections. The most southern, or that which constitutes the present State of the name, was organized under the title of the *Territory of Orleans* in 1805; and having adopted a constitution was formally admitted into the Union in 1812.

After the division of the North-West Territory in 1800, that portion of it extending westward to the Mississippi, and northward to the Lakes, was denominated the Indiana Territory. It embraced all the white settlements upon the Illinois and Upper Mississippi, as well as those in the vicinity of Detroit. During the late war, the different expeditions which traversed this and the other neighboring territories, says Dr. Monette, were virtual explorations of the fertile and beautiful country, by thousands of hardy, young and enterprising pioneers. In 1816, a sufficient population having been attracted by the alluring prospects, *Indiana* was admitted into the Union.

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* In the treaty of peace of 1783, Spain was permitted to accede. The British, in making this treaty, for some time insisted upon the Ohio river as the western boundary of the United States, but finally yielded the Mississippi. The accession of Spain was promised on the condition only, that the Americans relinquish all claims west of the Alleghany mountains, and to the navigation of the river. Mr. Jay, despatched to Spain, was unable to effect a treaty on account of these pretentions. They were sustained by France, as the letter of Rayneval, Secretary of Versennes, and the intercepted letter of Marbois, evince. These facts induced the American negociators to settle a treaty with Great Britain without consulting the French Court, notwithstanding their instructions to the contrary. A secret article in this treaty, provided that a line due east from the mouth of the Yazous, on the Mississippi, and not the 31° of latitude, should constitue the southern boundary of the United States, in case Great Britain should recover possession of the Floridas. On this account, perhaps, the Spaniards refused to deliver the territory between these lines, claiming it as Florida until 1798. About this period France became solicitous of regaining her old possessions, and succeded, by the treaty of Ildefonso, in her purpose. This was at a period when, the treaty of Amiens having been broken, war was daily expected by the United States with that republic. It was seen how dangerous to us it was that such an enemy should command the approaches of the whole Western country. Spain had already, in violation of her stipulations, refused all right of deposit for our commerce at New Orleans, or any other point within the territory. Great Britain, too, was opposed to the recovery of Louisiana by France. The purchase of Louisiana was effected, and this led to embarassing disputes about boundaries. Spain, who was to have receded to France precisely what she got from her, maintained that nothing east of the Mississippi, except the island of new Orleans, was received. Nothing beyond this could pass to the United States. This construction, it appeared afterward, was fully admitted by France, and with much force. An American port of entry which was established within the region, on the remonstrance of Spain, was immediately given up. Mr. Monroe and Charles Pinckney at the court of Madrid, were instructed to negociate a treaty, demanding to the Rio Perdido, on the east of the Mississippi, and to the Rio del Norte on the west, and from the sources of the last river, west of all the rivers emptying into the Mississippi. Spain considered the pretention as altogether unfounded. The American ministers submitted a final proposition, which was not accepted—viz., that they would relinquish all claim for spoliations in Spanish ports, and damages at New Orleans, and all territory west of the Mississippi, from a line along the Colorado to its sources, and continued to the northern limits of Louisiana, west of all rivers emptying into the Mississippi, on condition of having ceded to them the territory *east of the Mississippi*. This was in 1805. The Spaniards refused

The extensive region embraced between the Mississippi and Chattahooche rivers, to the northward of the 31° parallel of latitude, was established, in 1798, as the *Mississippi* Territory. In 1816, the white settlers were embraced within three separate and remote districts. The first district extended from the Mississippi to the Pearl river. The second was situated on the Tombigby and Mobile rivers. The third, in the county of Madison, 400 miles from Natchez. The inhabitants were almost entire strangers to each other, separated as they were by vast wildernesses. The inconveniences were greatly felt, and it was even proposed in 1815 to extend the bounderies of Louisiana to the Pearl river, thus embracing within it almost the entire present State of Mississippi. Two years after this, Mississippi Territory was divided, and the western portion authorized to form a State government, preparatory to its admission into the Union. This last was effected on the 10th day of December, 1817.

The North-Western Territory, besides the States of Ohio and Indiana, which were carved out of it, contained the germs of two other great States—viz., ***Michigan*** out of the county of Wayne, and ***Illinois*** out of the county of St. Clair. The Illinois Territory increased rapidly with the spread of Western population, and in 1817 was found of sufficient extent to constitute another independent member of the Federal Union.*

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to receive it, and denied the right of the United States even to the eastward of that river.

Bonaparte, now Emperor, entered into the contest, and though he had promised his aid to the Americans in the purchase of the Floridas, when signing the treaty of cession, he now declared that any pretensions east of the Mississippi, except New Orleans, was an aggression upon the right of Spain. Although pending the treaty Marbois had continually adverted to the fact that Louisiana extended to the Perdido and included Mobile, it was afterward convenient in diplomacy to remember none of this. A difficulty on account of boundaries was foreseen, and was pleasing to Napoleon.

Soon after a note, in the hand writing of the politic Tallyrand, to our Minister, Mr. Armstrong, exhibited a change in the views of Napoleon, and his favorable wishes for the acquisition of Florida by the United States. An hostile attitude was recommended toward Spain. The President of the United States called upon Congress for advice, and received an appropriation of two millions, for the purchase as far as the Perdido. It was said at the time, that the two Floridas could be obtained for $5,000,000. The mission of Mr. Bowdoin immediately after failed. Pending the negociation, the Americans took possession to the Sabine, and left all the east subject to negociation. Gen. Wilkinson was ordered in no case to occupy further than the Pearl river, and only then should New Orleans be endangered.

Things remained in this condition until 1810, when, on the revolution of the people of West Florida, and their declaration of independence being sent to Washington, Mr. Madison ordered the occupation of the territory, despite of the protests of the British chargé.

The Spanish Governor of Florida having expressed a desire of delivering it up to the United States, to prevents its falling into the hands of a foreign power, Gen. Matthews was commissioned by Congress to take possession peaceably, with the promise of re-delivery; or, if this could not be effected, and a foreign power was about to interfere, to seize upon both the Floridas *by a resort to arms.* The act of Gen. Matthews taking possession of East Florida was disavowed by the President. We have already seen the termination of this controversy, which gave us Florida—a territory regarded so important, that the State of Georgia proposed, in 1778, as an amendment to the Articles of Confederation, that it should have the privilege, at any time, of acceding to the federation.—*See Pitkins*, 21, *etc.*

* Monette, vol. II.

The eastern portion of the Mississippi Territory, after the division in 1817, received the name of the *Alabama* Territory; the population of which, increasing rapidly by emigration from the different Southern States, demanded admission into the Union in 1819, and were received by a joint resolution of Congress.

Maine was granted as a province to Sir Ferdinand Gorges, in 1639. In 1649, the inhabitants, deserted by the Commissioners appointed to govern them, combined for their own safety. In 1652, at their request, they were taken within the jurisdiction of Massachusetts; but by command of the king, two years after, the province was restored to Gorges. Massachusetts, immediately afterward, resumed her jurisdiction, and purchased the right of the proprietor of the territory. This measure displeased the king, who demanded that the province should be delivered up to him. In 1820, it was separated from Massachusetts, and admitted into the Union.

The territory of Louisiana, northward of the 33° of latitude, was designated, in 1812, by Act of Congress, the Missouri Territory. Up to 1815, St. Louis, within this territory, was a French town, in which no signs of improvement had been made. A revolution was, however, at hand, and population, as in other portions of the West, flocked to this quarter. In 1817, application was made for admission into the Union, and the great and agitating question which then arose, and which has, on so many subsequent occasions, under different names, disturbed the councils of the nation, known as the "Missouri Question," is but too familiar to us all. The people of Missouri, as well as of all the southern States, maintained that the rights of persons and property of the inhabitants of Louisiana having been guaranteed to them in the treaty of purchase, any attempt to disturb them in the enjoyment of these rights would be a manifest violation of honor and justice. That Congress had not, under the *constitution*, a particle of right to interfere in regard to the domestic relations of any State, or to prescribe any other conditions of their admission into the Union than those contained in that instrument. That to prescribe the condition of an abolition of slavery, was a gross outrage against the constitution—against the inhabitants of the State—and an insult to the whole southern portion of the Union. Its enforcement would lead inevitably to a dissolution of the Union itself. These discussions were continued, in the bitterest spirit, for nearly two years, upon the floors of Congress, until the Hon. Henry Clay, of Kentucky, introduced that celebrated measure which is known as the "Missouri Compromise," and which alone could have composed the disturbed elements of the country. By this "Compromise" it was agreed, that the institution of slavery, on the west side of the Mississippi, should be recognized in the present State of Missouri, and no further westward than that, or north of the latitude 36° 30′. The State was then formally introduced into the family of the Union in 1821, after a delay of almost four years.

Steam navigation having been opened on the northern lakes, population began strongly to set in the direction of the Michigan Territory. Its fine, level and rolling plains, its deep and enduring soil and its immense advantages for trade and commerce, says Dr. Monette, had become known and duly appreciated. The hundreds of canoes, pirogues and barges, with those half civilized *couriers du bois*, which had annually visited Detroit, had given way to large and splendid steamboats, which daily traversed the lakes. Nearly a hundred sail of sloops and schooners were now traversing every part of these inland seas. The New England States began to send forth their numerous colonies and the wilderness began to smile. In 1836 a constitution was adopted, and in the following year ***Michigan*** admitted as another State into the Union.*

In looking back to this stormy period, which almost, for the first time, threatened the stability of our institutions and government, we cannot but be impressed with the solemn lessons which it inculcates. Almost every possible mode of reconciling the bitter animosities, sectional interests and prejudices, had been attempted in vain. John Randolph, of Roanoke, had even proposed that the Southern members retire home in a body, as having no longer any interest in an Assembly which did not recognize their rights and privileges. The sentiment began generally to prevail. In this dark hour for the Union, there was, perhaps, no other hope than in the measure which was adopted. Whether it has been well for the South, however, or whether she did not, in yielding to the exigencies of the times, yield up a most important and sacred principle, which has been the occasion of all the subsequent injuries and aggressions that have been heaped upon her in the halls of Congress, might be worthy of consideration.†

The progress of ***Arkansas***, constituting a part of the original Louisiana Purchase, for the first ten years after its territorial government had been established, was not marked by any considerable improvement. In 1824, the western portion of it was marked off and set aside for the future residence of the Indian tribes west of the Mississippi. In 1834, the American people, says Monette, became enthusiastic for Western lands, and pushed their enterprises even beyond the Rocky Mountains. The planters from Mississippi, Louisiana, Georgia and Tennessee, were attracted by the prolific regions on the Red River, and the fame which they had excited. They, too, even pushed their explorations, following the course of this river into Texas and spreading throughout that territory, fixed, at its very origin, the American character, and sympathies of that Republic. In 1836, the State of Arkansas took its stand among the other proud commonwealths in the American Union.

Florida, whose early history embodies so much of the poetry and romance of our country, and whose possession was so much an object, at all times, with Spain, France and England, came, after the Louisiana Purchase, to be no less an object of interest and anxiety with the American people. Its possession by a foreign power was regarded dangerous, and more especially by a power like Spain, who, from her impotency, was incapable of preserving its neutrality, evinced during our contest with Great Britain and immediately afterward. Gen. Jackson, in prosecuting war against the Seminoles, *assumed* authority for taking possession of the country in 1818. It was soon after restored, but negociations were pressed, having for their end its purchase by the United States. John Quincy Adams and Don Onis concluded a treaty of cession, which was confirmed by the Senate in 1821.

By the terms of this treaty, five millions of dollars, in payments to be made to American citizens, for claims on account of Spanish spoliations, was the equivalent for which Florida was to be annexed to our territory. Without any apparent reason, however, and most unquestionably without authority, Mr. Adams consented to cede away for ever to Spain, all that territory *westward* of the Sabine to the Rio del Norte, included within the present State of *Texas*, and so much insisted upon as a part of Louisiana, previous to its cession to Spain, and as it was to be received by us, by the terms of the treaty of purchase. This clause of the treaty produced great opposition in Congress, but was sustained by the North, ever hostile to the growing influence of Southern territories, on account of slavery, and only to be propitiated for the annexation of Florida by this sacrifice. Mr. Monroe reluctantly consented to the treaty.

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* Monette ii, 534.

† See Statutes S. Car., vol 1. Dr. Cooper's Remarks on North-West Territory.

In 1822, Florida passed under the first grade of territorial government. In 1838, a memorial was sent to Congress for admission into the Union. The constitution which had been prepared for the State, proving offensive to the anti-slavery interests, several years were suffered to elapse before any justice could be received at the hands of that body. Finally, in 1845, the measure of admission was effected, as it were, by an artifice. To such miserable extremes is the South pushed whenever the question of slavery is touched.

The Huron District, as it was originally called, west of Lake Michigan, was erected into the Territory of Wisconsin. It extended to Lake Superior, to the Missouri river, and included the sources of the Upper Mississippi. The country embraced in it, westward of the Mississippi, was called the District of Iowa, erected in 1838, into an independent territorial government. A convention, in 1844, framed a constitution for the proposed State of *Iowa* It was approved by Congress, and an act of admission passed, provided that the State limit and restrict, by a new constitution, the boundary which it had claimed. This the people refused until 1846, when a new constitution was ordered to be framed, and Iowa was formally admitted into the Union, on the 26th of October of the same year, being the fourth important State growing out of the Louisiana Purchase. This State being northward of 36° 30′, is, under the Missouri Compromise, of necessity a free one.

The Territory of Wisconsin, from its unrivalled and extraordinary advantages—commercial, agricultural and manufactural—began, about 1842, to increase in population at a ratio which is perfectly amazing. In the single year 1843, sixty thousand persons are supposed to have entered the territory. The people appeared satisfied with the *territorial* government for several years after they were entitled to assume that of the *State*, by virtue of numerical strength. A convention was. however, called in 1846, for the adoption of a constitution, and the State of *Wisconsin* entered the Union, constituting the twenty-ninth of the confederation.

The Spanish treaty, in 1819, concluded between Don Onis and Mr. Adams, we have seen, relinquished to Spain all claim entertained by us to the territory west of the Sabine. *Texas* was, at that period, in the possession of the Indians, and a few Spanish settlements were scattered, at distant intervals, over it. Among these were San Augustine, Nacogdoches, and others upon the Trinity, Brazos, Colerado, Guadaloupe and

San Antonio de Baxar. These settlements were each under the government of a military commandant. On the Mexican revolution of 1821, and the establishment of the United Mexican States in 1824, Texas and Coahuila were admitted as one member. The Mexican Congress were now disposed to grant extraordinary facilities for the colonization of this extensive region, and Mr. Austin received a grant for the consideration of introducing three hundred families from the United States. Influenced by the most liberal grants, population began to flock from every quarter into the territory. As early as 1835, six-sevenths of this population were Anglo-American.

The union of Texas and Coahuila, however, was an unnatural one, and tended to repress the energies of the Texans. They prayed for a dissolution of this union, and that they might be permitted to introduce, for three years, duty free, articles necessary to the prosperity of Texas. These prayers were unheeded, and Santa Anna, having, in 1835, overthrown the constitution of 1824, sought, throughout all the States of the confederation, to carry out his usurpations. In this he was resisted by Texas, at the threshold; and that patriotic State established a provisional government, declared its independence, and framed a constitution for the *Republic of Texas.*

We are all familiar with the bloody wars which ensued, and the glorious results which attended the arms of the young republic. The Anglo-American spirit was everywhere triumphant, as it needs must be where the prize is *liberty.* But let us follow the subsequent career of Texas, which is, indeed, so familiar as to detain us but a few moments.

Scarcely had the battle of San Jacinto been fought, which in effect secured the independence of Texas, than that State, with almost an unanimous vote, petitioned to be admitted into the Union of which its population had been almost entirely made. Both Gen. Jackson and Mr. Van Buren, the year afterward, considered the proposition as premature, and likely to affect our friendly relations with Mexico. The independence of the State was, however, immediately recognized by our government, as well as by Britain, France and Holland. In 1842, Mr. Tyler, regarding all difficulties removed by the complete sovereignty of Texas for so long a period, without a hostile foot within her borders, concluded a treaty of annexation, which was submitted to Congress at the same time that Mr. Shannon was dispatched to Mexico to prevent any possible difficulties with that republic. The treaty was rejected by the Senate, as exceptionable in its terms, and Mr. Shannon, being treated with indignity by the Mexicans, demanded his passports and returned. The annexation, however, was effected by other means. A joint resolution of both Houses was signed by the President in 1846, defining the terms upon which the annexation should take place; which were, that Texas retain her own lands, pay her debts, that her western boundary should remain undefined, and, what was of more importance, that the principles of the *Missouri Compromise* be forever applied to any States which might be carved out of her, north of 36° 30′. On the passage of this law the Mexican Minister at Washington at once protested, and returned home. The Mexican nation at large exhibited the bitterest hostilities and defiance. All the foreign interests in Texas were aroused to prevent the possibility of the contemplated union. Captain Elliott and the Baron Cyprey took the lead in a system of intrigues which required the most sleepless vigilance and activity. At their instance, and to prevent annexation, Mexico was willing to forego her darling scheme of conquest, and decree the *independence* of Texas. Vain labors, when opposed to national sympathy and destiny. A convention of delegates *unanimously* assented to the proposition of Congress, and framed a State constitution. By a law passed soon after, Texas was formally admitted into the Union.

The treaty which has been lately concluded with Mexico is another great epoch in the history of our Union. We have been secured in the possession of a territory which belonged to us by the terms of purchase from France in 1803, but which, without sufficient cause, we suffered to escape; and we have also come into possession, beyond this, of an empire, extending to the shores of the Pacific, as large, if not larger, than that of all the previous Southern States combined. It is enough to form a dozen States, should all circumstances combine. But we have omitted other great territorial adjustments.

No sooner had the Province of Louisiana been ceded to the United States, which cession gave us the unlimited possession and control of the whole valley of the Mississippi, than the importance of this middle empire was recognized, commanding the approaches to both oceans. To the Atlantic it was already open; but to the Pacific extended unexplored regions beyond the highlands, which supplied the sources of all the rivers emptying into the Mississippi, claimed, it is true, as far north as 49° as a part of Louisiana, but resisted and opposed by Spain, and with much apparent reason. Mr. Jefferson immediately despatched Lewis and Clarke to explore this whole region, tracing the sources of the Missouri, and following to the ocean the course of any stream which might afford practical water communication across the continent. It was not until 1819, as we have seen, that Spain was willing to submit to negotiation the disputed questions of boundary and territory, which arose under the Louisiana Purchase, or to moderate her opposition to that purchase. In that year, Don Onis, conceiving that a sufficient equivalent had been offered by the American Secretary, agreed to quiet the title of the Americans, so far as Spain was concerned, to all territories westward of the Mississippi, and northward *indefinitely* of the 42° of latitude, to the shores of the Pacific.

This treaty narrowed down the controversy in regard to these remote north-western regions, to one between Russia, France and Great Britain, all claiming *undefined* rights in the territory. An imperial ukase asserted the right of Russia to the whole coast north of the 51°; but in 1824 and 1825, that power was willing to relinquish all pretentions to the southward of 54° 40′.

The question came up now between Great Britain and the United States, with little probability of an immediate settlement, and often with scarcely any possibility of an *amicable* one, of the important controversy involving a region twice as large as the whole of France. The Americans claimed to the Russian boundary, by virtue of their Louisiana Purchase, of the treaty of 1819 with Spain, of the explorations by Lewis and Clarke, the discoveries of Capt. Gray on the north-west coast, and the settlements on the Columbia river. The British claim of discovery and exploration had also many strong points. Nothing short of a *compromise* could have settled the angry dispute, and to this very strong parties in both countries were opposed. The whole matter coming before Mr. Webster and Mr. Packingham, the British Minister, in 1842, was, by what is called the Treaty of Washington, happily adjusted, and the line of 49°, which had constituted the previous boundary between the powers, continued to the Pacific ocean.

In consequence of defective explorations, difficulties arose under the treaty of 1783, with Great Britain in regard to the northern boundary of the States. An attempt was made in 1802, to correct the error made in regard to the position of the *Lake of the Woods*, but government, in the fear of a conflict with the boundary north of Louisiana, when purchased, did not ratify it. In 1818, the difficulties were still unsettled, and, by a convention of that year, the line was to run west from the Lake of the Woods to the Rocky Mountains, on the parallel 49°. But in regard to the line passing through the great Lakes, the various islands situated in them, the north-west angle of Nova Scotia and the highlands mentioned in the treaty, and also the islands situated in Passamaquoddy Bay, these were left by the Treaty of Ghent to be determined by three several boards of commissioners, to be appointed by the two powers.

Two of these boards of commissioners, after long protracted and exhausting investigation, came to amicable arrangements in regard to the matters entrusted to their charge.

The other board, or that having charge of the Nova Scotia and north-east boundary, failed in coming to any accord upon the subject. Their difference regarded a territory extending one hundred miles to the northward of Maine and southward of New Brunswick. The dispute according to the terms of the arbitration, was left to the king of the Netherlands, and his decision was made in January, 1831. This award was not confirmed by the United States, on the ground that the arbitrator had transcended his powers.

Thus the Maine boundary controversy, as it is called, continued to be waged for a number of years, threatening hostilities upon both sides, until other elements of discord having been introduced between the two nations, by the events growing out of the Canadian revolution and the burning of the Caroline, the British government accredited Lord Ashburton, as minister extraordinary, to settle, by a treaty, all the questions at issue.

Maine, Massachusetts and New Hampshire, sent or instructed commissioners to represent their rights at Washington during the discussion. The territory in dispute amounted to 12,027 square miles, or 7,697,280 acres. For Great Britian it had no practical value as stated by Lord Ashburton, other than as connective of the different North American possessions of that power. Within this region was comprised the valley of the Aroostook, represented as one of the most beautiful and fertile tracts in that part of the continent.

After protracted discussions it was agreed between the negotiators to divide the disputed region according to a line agreed upon, which gave to England 3,207,680, and the United States 4,489,600 acres. The latter part is represented by Mr. Webster as four-fifths of the value of the whole territory. To this compromise the commissioners of Maine, Massachusetts, etc., reluctantly, but for the sake of the Union and a consideration of $250,000, promised by Mr. Webster, agreed, and the final boundary was settled.*

Thus have successively arisen and been amicably settled, all of those land and border controversies, which during a greater portion of our history have occupied the attention of Congress and the people. Throughout all of them our progress in territory has been gradual and sure, so that at the present moment we have an empire westward of the Mississippi alone, vastly greater than the whole possessions of the Union on the adoption of the federal constitution. Have these controversies forever closed, or will there be others to arise, discussed and result again in different accretions of territory? With Texas we shall have discussions in regard to her western limits; with Mexico, under the late treaty, it is not improbable, when complete surveys have been made, many difficulties will exhibit themselves, and if, which is not unlikely, there be not moral force enough in that republic to sustain the treaty, we may expect to have the whole question again opened and then, so far as she is concerned, farewell forever to the peninsula of California and the regions of the Sierra Madre. On the northern borders lies Canada, an easy conquest in time of war. On the Atlantic, and laved by our waters, are the West Indies and especially Cuba. On the Pacific it may be discovered the Sandwich Islands would furnish most excellent ports for our western marine. All of these questions are in the womb of time, and we can only trust that a good and wise Providence will direct and control us through them all—that we may not, like Rome of old, totter and fall by virtue of our so great stature and unwieldy proportions.

Already does our empire extend over domain wider than that of the Romans in their proudest days of conquest. From the island of Brazos, in the Gulf of Mexico, to the Straits of Fuca, on the northern Pacific; from the Aroostook valley to the Bay of St. Diego, the Union extends its leviathan proportions. The inhabitants of these extreme points, more distant than the shores of the old and the new world apart on the usual routes of travel, are brothers and fellow-citizens, under common laws and with a common destiny. It is as though the Shetland Islands and the Bosphorus, Siberia and the gates of Hercules, were made the outposts of an empire which embraced the whole of Europe. For such an empire Alexander and Cæsar sighed in vain and Napoleon deluged Europe in blood.

In addition to the thirty States forming component parts of the Union, there are four organized *territories* to which a few moments attention will be given. The territories of the United States are the *nucleus* out of which States are formed. Jurisdiction over them is given by the constitution to Congress, were it not inferrable from the general power implied in all sovereigns to make conquests and govern the conquered territory. The ordinance of 1787 asserted this power and regulated its exercise. In the late territorial organizations the right of electing their councils or legislature is given to the people, though the governor and all executive officers are appointed by the President. Their laws must annually be submitted to Congress for approval, and they may send a delegate there with power to debate but not vote. Thus have we in our midst an anomalous government, wherein legislation and representation have no sort of connection. It is a system of colonization as complete as that of England over her American possessions. "Such a state of absolute sovereignty," says Chancellor Kent, "on the one hand and absolute dependence on the other, is not congenial with the free and independent spirit of our native institutions, and the establishment of distant territorial governments ruled according to will and pleasure would have a very natural tendency, as all proconsular governments have had, to abuse and oppression."*

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*The letter of Capt. Talcott, accompanying the treaty of 1842, gives the length of boundary between Great Britain and the United States.

The *District of Columbia* is the first in order of present territorial governments and from its embracing the *capital* of the United States is the most important. The necessity of fixing some permanent place came early to be perceived. During the revolution and after Congress held its sessions at Philadelphia, Baltimore, New York, Lancaster, York, Princeton, Annapolis and Trenton. In 1783 Congress, having been insulted at Philadelphia by a mob, removed its session to Princeton to the halls of the College. In 1784 commissioners were appointed to procure a site between two or three miles square, upon the Delaware river, and erect suitable buildings. Under this commission nothing was effected. In 1789, a bill passed one house in favor of a location upon the banks of the Susquehanna. Subsequently the present site was adopted, by virtue of acts passed in 1788, 1789, by Virginia and Maryland ceding ten miles square, upon the Potomac, to the United States, under the name *Connogocheague.* Within this district Congress held its first session in November, 1800. During the past year the Georgetown and Alexandria portion of the District was receded back.

The *Indian Territory,* west of Arkansas, was separated by act of Congress in 1824 and reserved to the use of the Indians. The jurisdiction of the United States courts for the district of Arkansas, was afterward extended over it, except in cases of offenses by Indians against Indians.

In 1840 population began to set in the direction of the valley of the Columbia river. In the spring of 1845 the settlers in that quarter were so numerous, that they organized a provisional government, claiming the protection of the United States. In 1842, the emigration from the United States was one hundred and thirty-seven; in 1843, eight hundred and seventy-five; in 1844, one thousand four hundred and seventy-five; in 1845, three-thousand. Mr. Polk, in his message of 1846, called the attention of Congress to this territory, and advocated the immediate extension of the laws and jurisdiction of the United States over it.

The Nebraska Territory and the Territory of Minesota, are the remaining two under our system, and advance in population at a rate which evinces they will soon solicit higher rank in the nation. Our paper is already too much extended to admit any further references to them.

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* Vol. I, 386.

ART. II.—MANUFACTURE OF COTTON BY ITS PRODUCERS.

COTTON MILLS BY COTTON GROWERS; EXPORT DUTY ON RAW COTTON; PRICE OF COTTON, ETC.

NASHVILLE, SEPT. 20, 1849.

J. D. B. DE BOW, ESQ.—Inclosed you will find an article on cotton mills, etc., which may possibly be worth a place in the Commercial Review, the best periodical now published in the United States, for southern men.

If you think it worth recording in your very useful journal, you may insert it over my name, S. R. Cockrill.

I am so well satisfied of the correctnsss of the views, that I should like them presented in some shape to all the cotton growers in the nine States. Some of my southern friends, sojourning for the time here, pronounced the plan practicable and desire me to have it circulated. It is extremely important to the cotton States. I believe ten cents a pound may, by this plan, be insured to the grower, which would make the South the richest and most brilliant portion of the Union.

The uncertainty in the quantity now, and the *certainty* of low prices except about one year in five, will compel growers to bring to the support of the field labor the spindles and looms.

The cotton crop is worth $150,000,000 per annum, when run through the spindles; one-fifth of the field force can do it, and the machinery can be paid for by the profits, the extra profits, of two or three crops.

The buildings would cost nothing but six months' labor.

As a planter I am decidedly in favor of the export duty of five dollars per bale. This would insure what the South wants to maintain its pride and independence. Respectfully, etc.

COTTON is the leading and controlling staple of the South, embracing nine States of the thirty, of the United States, and therefore worthy of consideration and study, by all who feel an interest in the prosperity of this end of the Union.

For seven years past, the labor of cotton growers has been sacrificed, and the prospect of a fair remuneration for the growing crop, will pass away before another comes into market; leaving the future as a counterpart of the past, with a tendency to get worse unless a remedy be applied.

The only safe and substantial remedy, is to put up the *cotton mills* among the cotton fields. The great bulk of the crops when put into market, is classed as "inferior," "ordinary," and a small portion "middling;" and these classes have not averaged to the planters more than six cents for seven or eight years past, and some crops have been sold during this period as low as four cents per pound.

A continuation of these prices, will soon create a necessity for a remedy for these low rates, which are not a compensation for the immense labor required in the cultivation of cotton. Under the present plan, the planter's labor, composed of "the sweat of his brow," and the substance of his soil, baled up as *raw cotton*, is shipped off annually four thousand miles to cotton mills, in foreign countries, but chiefly to England, at an expense of eight or nine dollars per bale, which is charged to the grower when the account of sales is furnished from the mill.

If this tax to get to mill was the only evil, it might be yet endured for a while; but there is in reality but one great cotton mill, and that belongs to England, and her agent sits at Liverpool and sees our labor, in bales of *raw ootton*, piled up around him till it will cover a ten acre field. The reports of that market will show a stock, sometimes of a million of bales, then stored in Liverpool unsold: with a knowledge of the fact, that it cannot be taken any where else. The grower has no remedy. *There* are the *spindles*, and *there* it must stay; and the agent of this tremendous English mill says, "I will pay you three and half pence per pound for your cotton," and it is sold. An account of sales is sent to the planter, in *£. s. d.*, in red ink, with double entries; and when translated into *English*, he finds that his part is four cents per pound.

Cultivators of this great staple know, that such prices are no compensation for the immense labor required in its growth. They know it is a *sacrifice*, which looks to ruinous consequences, because the substance of their lands is annually wasting away by continued cultivation.

The remedy which is now insisted on is, for the *planters themselves* to "resolve," that the cotton mills shall be brought to the *cotton fields.* That they have been paying toll to the English mills long enough. Make the *resolve*, and the ways and means will be readily pointed out for effecting the end proposed. The cotton fields of the United States, extending from the Atlantic to the Rio Grande, embrace, in their wide extent, 500,000 square miles. The interest of *all planters* in this great cotton field is the same. State lines are imaginary, when the sacrifice of cotton growing labor is the question; and old issues in politics may rest in forgetfulness; and the whole South may act as one State, in giving a prosperous direction and division to the labor, of the best trained, most efficient and regular force of workers on the face of the globe. This splendid force of laborers, if directed by skill and wisdom, will yet make brilliant the prospects of the Southern end of our Union. But a part of this force must be taken from the soil and put into the mills.

The spindles and looms must be brought to the cotton fields. This is the true location of this powerful assistant of the grower. In the *West*, in the East or in the North, would be better than any foreign country; but the *best* location is the sunny South, where the cotton grows. The next best location is in the provision regions nearest the South.

To fix the public mind on the importance of this change, its necessity indeed, and to compel planters to investigate it, it is proposed that they as a body petition Congress to propose an amendment to the 9th article of the constitution of the United States, which prohibits a "duty on exports from any State," and when amended, that they pass a law, that five dollars per bale be paid into the treasury of the United States upon all *raw cotton* shipped after the year 1860.

This would be evidence of a determination among them, and ten years notice to the world, that they would no longer go four thousand miles to mill with their cotton.

An average crop now of United States is about 2,300,000 bales, which, at six cents, is $55,000,000. The estimated cost of spinning and weaving a pound of cotton is three cents, making two yards to the pound, equal to eighteen cents per pound, at nine cents per yard for Osnaburgs. The crop then, when spun and wove, is worth eighteen cents per pound, making $180,000,000, allowing ten per cent. for waste, **instead of $55,000,000 the yield *now*, when sold as *raw cotton*.**

The inequality between the labor and capital for growing, and that for spinning, is startling. A pound of cotton, plowed, hoed, picked, ginned, baled, spun and wove, is worth eighteen cents. The spinning and weaving, it is said, can be afforded for three cents cost, which would leave fifteen cents per pound for the labor of the planter, supposing the cotton mill in the cotton field, and the mill to get cost only. But as three cents may be too low an estimate, make it six—and then twelve cents is left for the planter. But now what does he get? four, five and six. The question may now be asked, who gets the balance—allowing six cents to the grower and six cents to the spinner, there will be six cents yet unaccounted for? It goes to pay warehouse charges, freight, insurance, drayages, storages, weighages, *pickages*, pressage, commissions, postage, bills of lading, exchange, freight to Liverpool, dock dues, freight on railroad to Manchester, and then it is at the mill, and the same process brings it back, and this will fully account for the six cents per pound. Who pay these charges? The grower.

The growth and production of cotton are accomplished by the muscles of men and mules, laboring incessantly eleven months in every twelve; exposed to heat, to cold, to winds and rain, and to the malaria of swamps.

The spinning and weaving are done by the iron muscles of the spindle and loom, driven by the never-tiring engine, waited upon by boys and girls; and this labor is under roof, certain as to *quantity*, free from overflow, from frost, from caterpillar and boll worm. This simple statement is evidence clear and strong, that it is the grower's labor which is now sacrificed, and greatly sacrificed. A firm and determined resolution among the planters, for they are the men who are suffering, and they must act for themseles, can arrest this policy in a few years. An export duty on "raw cotton," would insure it, but it may be accomplished without it.

Having determined that the mills must come to the *cotton*, which is but one move, whilst sending the cotton to the mills is a heavy annual, perpetual tax, it is proper to inquire if cotton growers can get up the spindles and looms, among the fields.

The following facts answer the question in the affirmative, most distinctly. We estimate the crop at 2,300,000 bales. The factories now in the United States require of this 600,000 bales—leaving 1,700,000 for the South to spin. This would require 350 mills with 10,000 spindles each, or 700 mills with 5,000 spindles, or 3,100,000 spindles.

COST OF SPINDLES.

3,500,000 spindles with all machinery necessary, looms, etc., at $12 each,	$42,000,000
700 engines and fixtures at $8,000,	5,600,000
Other expenses in and about the machinery,	5,000,000
Total,	$52,600,000

The machinery, if all purchased in one year, would cost about $50,000,000. This is the only debt of importance necessary to be made, and its payment can be extended into ten installments, of $5,000,000 each, interest added. The difference in the income of the cotton growers when they become spinners, is so great that this debt would never be felt. The 1,700,000 bales intended for the cotton field spindles, now yields an income of $40,000,000 at six cents. The same cotton spun up, by the creation of the above debt by these iron muscles, will give the same growers an income of $120,000,000, less the cost of spinning and weaving, which would give an increase of net gain per annum nearly equal to the cost of the machinery.

One mode here suggested, is, for planters, provision growers, and mechanics of all the cotton States, to send in petitions for Manufacturing Companies to be chartered, upon applications to the Legislatures of their respective States; and also to pass an act for a general charter for all persons who may associate together for manufacturing purposes, so as to avoid partnerships, and limit the liability of stockholders to the loss of their subscriptions as stock.

Spinning may be commenced, with any number of spindles, with or without looms. There is an extensive demand for cotton yarns, and thread is a saleable manufacture. The mills at Lowell average about 6,000 spindles for each building. There is one, however, at Salem, containing 30,000 spindles, the largest in the world, under one roof. The size of buildings, then, will depend upon the quantity of machinery intended to be worked. A mill for 2,500, or 3,000 spindles, for coarse goods, will require, perhaps, three rooms twenty-five by sixty feet long; and a plan suitable for the *cotton field system*, which will be in the country, and where land costs nothing, and manageable by slave labor, at comparatively *no cost*, is for fifteen planters to take $4,000 each in stock, select a site for the mill near their plantations, detail three men from each, making a building force of 45 men, besides an overseer and a general manager, one of the stockholders; with this force, and as many teams as may be necessary, they will proceed to put up three rooms of twenty-five by sixty feet, of wood, one story high, of coarse, strong, undressed lumber, such as they can readily prepare from the forest, without an outlay of capital. Add at convenient distances fifteen or twenty cabins, and the buildings for the mill are up. This wooden, one story plan, for the cotton field, possesses the advantages of costing nothing, of fixing and running the whole machinery upon the ground, making it more steady, and accessable, and avoiding wear and tear, with better ventilation, less noise, and, perhaps, less risk from fire, because it is not the walls of a mill, but the cotton about the machinery, which is subject to burn.

One-story rooms, running in different directions from the engine, of wood, and without much labor in its preparation, are offered as a substitute for the four story brick and granite palaces of England and of New England, which are required to be built with thick walls, to avoid motion in the machinery, and therefore expensive, costing from $30,000 to $50,000; and when buildings for the operatives are finished, the bills are often $100,000 in a site and buildings, before a wheel is turned. Whilst the manager and overseer are putting up the wooden mill and cabins, the planters, acting under the charter, have issued their bonds for $40,000, bearing seven or eight per cent. interest, payable in three, four, and five years, in equal installments, and secured the payment by mortgage on the site and machinery, and a half section of land each, have sold the bonds and bought the spindles and engine, and are ready for operation in six months from the formation of the company. A man and four boys or girls are taken from the plantation of each stockholder and put in the mill, each getting credit according to the number furnished. These, with eight or ten trained hands as instructors, furnish a mill force which will spin and weave 1,500 bales of cotton; making a million of yards of osnaburgs worth nine cents per yard, equal to $90,000 gross sales. The stockholders being planters and near the mill, furnish provisions, cotton, and wood for the engine.

Suppose the planters who have put up this mill make 1,500 bales only of cotton, which at $24 are $36,000. Since the erection of the mill, the same cotton is worth $90,000 per annum. At the end of the three years they commence paying the debt for machinery by installments, and before this, the hands are trained to their new employment, and the planting account is raised from six to ten cents a pound for the *field labor*, which had been heretofore shipped off and lost. The mortgage debt is $2,666 each, being fifteen planters associated, to be paid in three installments of $888, with interest, and that, when they are getting for their field labor, ten cents per pound. What then would be a debt of $1,000 a year, on substantial planters, when they have insured ten cents a pound for their crops by incurring the debt.

There are nine cotton States, including Tennessee, which will average about sixty counties to the State. Two mills in every county of 3,000 spindles each, are sufficient to spin the whole crop, and render the South magnificently rich and gloriously independent. I mention these facts to show the immediate capability of the cotton growers, to relieve themselves from this blighting system of shipping off the soil in *raw cotton*, and bringing home nothing in return, comparatively speaking. There are twenty counties in Tennessee, South Carolina, Georgia, Alabama, Mississippi and Louisiana, and a less number in Florida, Arkansas and Texas, which can spare the force to erect the buildings and cabins, for ten such mills, in any one year and make the usual cotton crop besides.

Steam is a regular, portable power, free from freshets, droughts and mill ponds, and can be commanded at will for three hundred days in the year, in any desired quantity, suited to small or large operations. Two sections of land affording twenty cords of wood per acre, which is a low estimate, will drive an engine for 3,000 spindles, for eighteen years. This also shows that there is a permanent source or power in the cotton States, even when nature has not furnished either suitable streams or deposited in the earth, beds of coal; in some sections, however, both are found. The difference between the cost of water and steam, is but one item, and that not large; but the only difference now is that of wood and coal; steam power is now considered as cheap as water, all advantages estimated. Among the fields a site may be often selected, near enough to enable Stockholders to haul the seed cotton directly to the mill, the most desirable condition for the mill work. Thus saving the labor of ginning and baling, the loss on bagging and rope, commissions for buying cotton, and freight, besides saving the work of the picker at the mill.

Cotton growers, who have owned slaves long, know they are capable of making efficient operatives; and when once learned, they are fixed, permanent and valuable. This branch of the business furnishes profitable employment on cotton to a portion of the field force, which relieves the soil to that extent which is now wasting away from over fatigue. It gives scope to all the mechanical talent among the slaves, both males and females—men in the machine shops, and women among the mules, throstles, and looms. The condition of the States now is dependent; that is not the true position of the chivalrous South. A war with Great Britain would prostrate them at one blow. The revolution in France was like an electric shock, though she had but a few cotton mills. The starvation in Ireland, that bright Isle of the Ocean, puts *down cotton.* The Bank of England even, can and does press down the price of "*raw cotton*" at Liverpool; and its recoil falls back on the grower. This dependency is unmanly, and does not belong to the American character. The angry ebullition of emancipation sympathy for the happy slaves of the sunny South, among our own Northern and Eastern friends, is sometimes a source of a moment's uneasines; in consequence of our dependent condition, and the repeated sacrifice of our field labor. These dependencies should be forthwith severed, by a determination to put up the cotton mills, among the cotton fields, and spin and weave by slave labor.

This is the certain, safe, and sure remedy for all the *evils* enumerated above; bringing bright prosperity, humanity, with enlarged sympathies, and an ameliorated condition of the great working force of the South, in its train. Their labor, thus skillfully directed, would increase rapidly the net income of the growers, and slaves take the condition of their owners. Give them large incomes and you make the negroes rich. As a general rule (some exceptions I regret to say), rich owners have rich slaves.

The true character of the black man in servitude is not understood, except in the South. Negro society, with its amusements and sources of enjoyment, is not organized any where else to the same extent. They are born in servitude, and so were their fathers and grand-fathers, and a long line of ancestry, and they have never known any other condition, and but few ever desire to change it. The body is accustomed to daily labor; inured to it from early youth; and it is a habit of his life. The mind is not called into action—they are relieved from all the responsibilities, sufferings, and mental anxiety of freemen, amenable to the laws of the land, and the rules of society.

Out of the general fund, they are fed. clothed and housed; and medical aid and attention and care are furnished when sick; among them there are no widows or orphans thrown upon the charity of others; no paupers, and no lunatics; no painful anxiety for the future welfare of their wives and children; for a home and competency are left for them when they are dead and gone.

It is the duty of their owners to bring to the aid of this available and efficient corps of regular laborers in the field, the steam-engine, and the iron muscle of the spindle and loom; with these implements, they can put the labor of the field into a consumable shape, which leaves the world open as a market.

No longer will they pile up the cotton bales around the English mill agent in Liverpool, and suffer it to be sacrificed because they have no remedy. There will be a demand for coarse, heavy, cheap cotton goods, as long as there are laborers in the world to wear them, and in this shape the great bulk of the cotton crops will be consumed. Europe can continue to make the fine goods in which the raw material is no part of the cost; one pound making twenty yards of fine muslins.

South America, Asia, Africa, and the East and West Indies, grow about 470,000 bales of fine cotton, well suited for fine fabrics. This supply Europe could still convert into fine fabrics. New England to make prints, and all other three to five yards goods, and the cotton fields, in the sunny South, in a warm climate, can work up the bulk of the crop into coarse, heavy goods which will average not exceeding two yards to the pound. This system put into operation, would yield to the Southern States for cotton alone $150,000,000, and supply the spindles now up in the United States. What effect, such an income, in imports or money, would produce upon the trade and commerce of our Southern cities, is suggested for reflection only at present.

Large bodies move slowly; and to insure this result I suggest an export duty of five dollars per bale on "raw cotton." Corporate companies by growers, and all others. The cheapest buildings which will answer the purpose. Buy the machinery, and mortgage whatever may be necessary to raise the funds by sale of bonds at par. Spin and weave by a part of the field force. Do this, and the fortunes of cotton growers are fixed on a permanent foundation; promising accumulated wealth to the whole South.

The iron establishments in the United States, and the machine shops, generally, may look to the South as an extensive customer in a few years. It is, no doubt, the true policy of the South now, to order the machinery mentioned, worth $50,000,000. This must go to the iron establishments, and the profits might be taken in stock in some of the best mills—and thus lessen the outstanding liability for machinery.

The mild, warm winters in the South, are favorable to cotton spinning in cheap buildings. The passage of the export duty law would turn the eyes of all the spinners and weavers in Europe upon the South, and the country would be benefited for a while, by employing them, until the raw force is trained. These suggestions are made for the study and consideration of cotton growers. S. R. COCKRILL.

ART. III.—GOV. HAMMOND'S LETTERS ON SLAVERY.—No. 2.*

SLAVERY AND ITS SOCIAL EFFECTS; DUELLING; MOBS; REPUDIATION; LICENTIOUSNESS; COMPARATIVE EXPENSE OF FREE AND SLAVE LABOR; TREATMENT OF SLAVES; INSTRUCTION; PUNISHMENTS.

IN a social point of view the abolitionists pronounce slavery to be a monstrous evil. If it was so, it would be our own peculiar concern, and superfluous benevolence in them to lament over it. Seeing their bitter hostility, they might leave us to cope with our own calamities. But they make war upon us out of excess of charity, and attempt to purify by covering us with calumny. You have read, and assisted to circulate, a great deal about affrays, duels and murders occuring here, and all attributed to the terrible demoralization of slavery. Not a single event of this sort takes place among us, but it is caught up by the abolitionists, and paraded over the world with endless comments, variations and exaggerations. You should not take what reaches you as a mere sample, and infer that there is a vast deal more you never hear. You hear all, and more than all, the truth.

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*Continued from October number.

It is true that the point of honor is recognized throughout the slave region, and that disputes of certain classes are frequently referred for adjustment to the "trial by combat." It would not be appropriate for me to enter, in this letter, into a defense of the practice of duelling, nor to maintain at length that it does not tarnish the character of a people to acknowledge a standard of honor. Whatever evils may arise from it, however, they cannot be attributed to slavery—since the same custom prevails both in France and England. Few of your prime ministers, of the last half century even, have escaped the contagion, I believe. The affrays of which so much is said, and in which rifles, bowie-knives and pistols are so prominent, occur mostly in the frontier States of the South-West. They are naturally incidental to the condition of society as it exists in many sections of these recently settled countries, and will as naturally cease in due time. Adventurers from the older States and from Europe, as desperate in character as they are in fortune, congregate in these wild regions, jostling one another, and often forcing the peaceable and honest into rencontres in self-defense. Slavery has nothing to do with these things. Stability and peace are the first desires of every slave-holder, and the true tendency of the system. It could not possibly exist amid the eternal anarchy and civil broils of the ancient Spanish dominions in America. And for this very reason, domestic slavery has ceased there. So far from encouraging strife, such scenes of riot and bloodshed as have, within the last few years, disgraced our northern cities, and as you have lately witnessed in Birmingham and Bristol and Wales, not only never have occured, but, I will venture to say, never will occur in our slaveholding States. The only thing that can create a mob (as you might call it) here, is the appearance of an abolitionist, whom the people assemble to chastise. And this is no more of a mob than a rally of shepherds to chase a wolf out of their pastures would be one.

But we are swindlers and repudiators! Pennsylvania is not a slave State. A majority of the States which have failed to meet their obligations punctually are non-slaveholding; and two-thirds of the debt said to be repudiated is owed by these States. Many of the States of this Union are heavily encumbered with debt—none so hopelessly as England. Pennsylvania owes $22 for each inhabitant—England $222, counting her paupers in. Nor has there been any repudiation, definite and final, of a lawful debt, that I am aware of. A few States have failed to pay some installments of interest. The extraordinary financial dificulties which occurred a few years ago account for it. Time will set all things right again. Every dollar of both principal and interest owed by any State, North or South, will be ultimately paid, *unless the abolition of slavery overwhelms us all in one common ruin.* But have do other nations failed to pay? When were the French assignats redeemed? How much interest did your National Bank pay on its immense circulation from 1897 to 1821, during which period that circulation was inconvertible, and for the time *repudiated?* How much of your national debt has been incurred for money borrowed to meet the interest upon it, thus avoiding delinquency in detail, by insuring inevitable bankruptcy and repudiation in the end? And what sort of operation was that by which your present ministry recently expunged a handsome amount of that debt by substituting, through a process just not compulsory, one species of security for another? I am well aware that the faults of others do not excuse our own, but when failings are charged to slavery which are shown to occur to equal extent where it does not exist, surely slavery must be acquitted of the accusation.

It is roundly asserted that we are not so well educated nor so religious as elsewhere. I will not go into tedious statistical statements on these subjects. Nor have I, to tell the truth, much confidence in the details of what are commonly set forth as statistics. As to education, you will, probably, admit that slaveholders should have more leisure for mental culture than most people. And I believe it is charged against them that they are peculiarly fond of power and ambitious of honors. If this be so, as all the power and honors of this country are won mainly by intellectual superiority, it might be fairly presumed that slaveholders would not be neglectful of education. In proof of the accuracy of this presumption I point you to the facts, that our Presidential chair has been occupied for forty-four out of the fifty-six years by slaveholders; that another has been recently elected to fill it for four more, over an opponent who was a slaveholder also; and that in the federal offices and both Houses of Congress, considerably more than a due proportion of those acknowledged to stand in the first rank are from the South. In this arena the intellects of the free and slave States meet in full and fair competition. Nature must have been unusually bountiful to us, or we have been, at least, reasonally assiduous in the cultivation of such gifts as she has bestowed—unless, indeed, you refer our superiority to moral qualities, which I am sure *you* will not. More wealthy we are not, nor would mere wealth avail in such rivalry.

The piety of the South is unobtrusive. We think it proves but little, though it is a confident thing for a man to claim that he stands higher in the estimation of his Creator, and is less a sinner, than his neighbor. If vociferation is to carry the question of religion, the North and probably the Scotch have it. Our sects are few, harmonious, pretty much united among themselves, and pursue their avocations in humble peace. In fact, our professors of religion seem to think—whether correctly or not—that it is their duty to "do good in secret," and to carry their holy comforts to the heart of each individual, without reference to class or *color*, for his special enjoyment, and not with a view to exhibit their zeal before the world. So far as numbers are concerned, I believe our clergymen, when called on to make a showing, have never had occasion to blush, if comparisons were drawn between the free and slave States. And although our presses do not teem with controversial pamphlets, nor our pulpits shake with excommunicating thunders, the daily walk of our religious communicants furnishes apparently as little food for gossip as is to be found in most other regions. It may be regarded as a mark of our want of excitability—though that is a quality accredited to us in an eminent degree—that few of the remarkable religious *isms* of the present day have taken root among us. We have been so irreverent as to laugh at Mormanism and Millerism, which have created such commotions further North; and modern Prophets have no honor in our country. Shakers, Rappists, Dunkers, Socialists, Fourrierists and the like, keep themselves afar off. Even Pusyism has not yet moved us. You may attribute this to our domestic slavery if you choose. I believe you would do so justly. There is no material here for such characters to operate upon.

But your grand charge is, that licentiousness, in intercourse between the sexes, is a prominent trait of our social system, and that it necessarily arises from slavery. This is a favorite theme with the abolitionists, male and female. Folios have been written on it. It is a common observation, that there is no subject on which ladies of eminent virtue so much delight to dwell, and on which, in especial, learned old maids like Miss Martineau, linger with such insatiable relish. They expose it in the slave States with the most minute observance and endless iteration. Miss Martineau, with peculiar gust, relates a series of scandalous stories, which would have made Boccacio jealous of her pen, but which are so ridiculously false as to leave no doubt that some wicked wag, knowing she would write a book, has furnished her materials—a game too often played on tourists in this country. The constant recurrence of the female abolitionists to this topic, and their bitterness in regard to it, cannot fail to suggest to even the most charitable mind, that

"Such rage without betrays the fires within."

Nor are their immaculate coadjutors of the other sex, though, perhaps, less specific in their charges, less violent in their denunciations. But recently, in your Island, a clergyman has, at a public meeting, stigmatized the whole slaveholding region as a "brothel." Do these people thus cast stones, being "without sin?" Or do they only

"Compound for sins they are inclined to,
By damning those they have no mind to."

Alas that David and Solomon should be allowed to repose in peace—that Leo should be almost canonized, and Luthur more than sainted—that, in our own day, courtezans should be formally licensed in Paris, and tenements in London rented for years to women of the town, for the benefit of the church, with the knowledge of the bishop—and the poor slave States of America alone pounced upon, and offered up as a holocaust on the Altar of Immaculateness, to atone for the abuse of natural instinct by all mankind; and if not actually consumed, at least exposed, anathematized and held up to scorn, by those who

"write
Or with a rival's or an eunuch's spite."

But I do not intend to admit that this charge is just or true. Without meaning to profess uncommon modesty, I will say that I wish the topic could be avoided. I am of opinion, and I doubt not every right-minded man will concur, that the public exposure and discussion of this vice, even to rebuke, invariably does more harm than good; and that if it cannot be checked by instilling pure and virtuous sentiments, it is far worse than useless to attempt to do it by exhibiting its deformities. I may not, however, pass it over; nor ought I to feel any delicacy in examining a question to which the slaveholder is invited and challenged by clergymen and virgins. So far from allowing, then, that licentiousness pervades this region, I broadly assert, and I refer to the records of our courts, to the public press, and to the knowledge of all who have ever lived here, that, among our white population, there are fewer cases of divorce, separation, crim. con., seduction, rape and bastardy, than among any other five millions of people on the civilized earth. And this fact, I believe, will be conceded by the abolitionists of this country themselves. I am almost willing to refer it to them, and submit to their decision on it. I would not hesitate to do so, if I thought them capable of an impartial judgment on any matter where slavery is in question. But it is said that the licentiousness consists in the constant intercourse between white males and colored females. One of your heavy charges against us has been that we regard and treat these people as brutes; you now charge us with habitually taking them to our bosoms. I will not comment on the inconsistency of these accusations. I will not deny that some intercourse of the sort does take place. Its character and extent, however, are grossly and attrociously exaggerated. No authority, divine or human, has yet been found sufficient to arrest all such irregularities among men. But it is a known fact, that they are perpetrated here, for the most part, in the cities. Very few mullattoes are reared on our plantations. In the cities, a large proportion of the inhabitants do not own slaves. A still larger proportion are natives of the North or foreigners. They should share, and justly too, an equal part, in this sin, with the slaveholders. Facts cannot be ascertained, or, I doubt not, it would appear that they are the chief offenders. If the truth be otherwise, then persons from abroad have stronger prejudices against the African race than we have. Be this as it may, it is well known that this intercourse is regarded, in our society, as highly disreputable. If carried on habitually, it seriously affects a man's standing, so far as it is known; and he who takes a colored mistress—with rare and extraordinary exceptions—loses caste at once. You will say that *one* exception should damn our whole country. How much less criminal is it to take a white mistress? In your eyes it should be at least an equal offense. Yet look around you at home, from the cottage to the throne, and count how many mistresses are kept, in unblushing notoriety, without any loss of caste. Such cases are nearly unknown here, and down even to the lowest walks of life, it is almost invariably fatal to a man's position and prospects, to keep a mistress openly, whether white or black. What Miss Martineau relates of a young man's purchasing a colored concubine from a lady, and avowing his designs, is too absurd, even for contradiction. No person would dare to allude to such a subject, in such a manner, to any decent female in this country. If he did, he would be *lynched*—doubtless with your approbation.

After all, however, the number of the mixed breed, in proportion to that of the black, is infinitely small, and out of the towns, next to nothing. And when it is considered that the African race has been among us for two hundred years, and that those of the mixed breed continually intermarry, often rearing large families, it is a decided proof of our continence, that so few comparatively are to be found. Our misfortunes are two-fold. From the prolific propagation of these mongrels among themselves, we are liable to be charged, by tourists, with delinquencies, where none have been committed, while, where one has been, it cannot be concealed. Color marks indelibly the offense, and reveals it to every eye. Conceive that, even in your virtuous and polished country, if every bastard, through all the circles of your social system, was thus branded by nature and known to all, what shocking developments might there not be! How little indignation might your saints have to spare for the licentiousness of the slave region. But I have done with this disgusting topic. And I think I may justly conclude, after all the scandalous charges which tea-table gossip and long-gowned hypocrisy have brought against the slaveholders, that a people whose men are proverbially brave, intellectual and hospitable, and whose women are unaffectedly chaste, devoted to domestic life, and happy in it, can neither be degraded nor demoralized, whatever their institutions may be. My decided opinion is, that our system of slavery contributes largely to the development and culture of these high and noble qualities.

In an economical point of view—which I will not omit—slavery presents some difficulties. As a general rule, I agree that it must be admitted, that free labor is cheaper than slave labor. It is a fallacy to suppose that ours is *unpaid labor*. The slave himself must be paid for, and thus his labor is all purchased at once, and for no trifling sum. His price was, in the first place, paid mostly to your countrymen, and assisted in building up some of those colossal English fortunes, since illustrated by patents of nobility and splendid piles of architecture, stained and cemented, if you like the expression, with the blood of kidnapped innocents; but loaded with no heavier curses than abolition, and its begotten fanaticisms have brought upon your land—some of them fulfilled, some yet to be. But besides the first cost of the slave, he must be fed and clothed—well fed and well clothed, if not for humanity's sake, that he may do good work, retain health and life, and rear a family to supply his place. When old or sick he is a clear expense, and so is the helpless portion of his family. No poor law provides for him when unable to work, or brings up his children for our service when we need them. These are all heavy charges on slave labor. Hence, in all countries where the denseness of the population has reduced it to a matter of perfect certainty that labor can be obtained whenever wanted, and the laborer be forced, by sheer necessity, to hire for the smallest pittance that will keep soul and body together, and rags upon his back, while in actual employment—dependent, at all other times, on alms or poor rates—in all such countries it is found cheaper to pay this pittance than to clothe, feed, nurse, support through childhood and pension in old age, a race of slaves. Indeed, the advantage is so great as speedily to compensate for the loss of the value of the slave. And I have no hesitation in saying, that if I could cultivate my lands on these terms, I would, without a word, resign my slaves, provided they could be properly disposed of. But the question is, whether free or slave labor is cheapest to us in this country, at this time, situated as we are. And it is decided at once by the fact, that we cannot avail ourselves of any other than slave labor.. We neither have, nor can we procure, other labor to any extent, or on anything like the terms mentioned. We must, therefore, content ourselves with our dear labor, under the consoling reflection, that what is lost to us is gained to humanity; and that, inasmuch as our slave costs us more than your freeman costs you, by so much is he better off. You will promptly say, emancipate your slaves and then you will have free labor on suitable terms. That might be, if there were five hundred where there is now one, and the continent, from the Atlantic to the Pacific, was as densely populated as your island. But until that comes to pass, no labor can be procured in America on the terms you have it.

While I thus freely admit, that, to the individual proprietor, slave labor is dearer than free, I do not mean to admit it as equally clear, that it is dearer to the community and to the State. Though it is certain that the slave is a far greater consumer than your laborer, the year round, yet your pauper system is costly and wasteful. Supported by your community at large, it is not administered by your hired agents with that interested care and economy—not to speak of humanity—which mark the management of ours, by each proprietor of his own non-effectives; and is both more expensive to those who pay, and less beneficial to those who receive, its bounties. Besides this, slavery is rapidly filling up our country with a hardy and healthy race, peculiarly adapted to our climate and productions, and conferring signal political and social advantages on us as a people, to which I have already referred.

I have yet to reply to the main ground on which you and your coadjutors rely for the overthrow of our system of slavery. Failing, in all your attempts, to prove that it is sinful in its nature, immoral in its effects, a political evil, and profitless to those who maintain it, you appeal to the sympathies of mankind, and attempt to arouse the world against us, by the most shocking charges of tyranny and cruelty. You begin by a vehement denunciation of "the irresponsible power of one man over his fellow men." The question of the responsibility of power is a vast one. It is the great political question of modern times. Whole nations divide off upon it, and establish different fundamental systems of government. That "responsibility" which, to one set of millions, seems amply sufficient to check the government, to the support of which they devote their lives and fortunes, appears, to another set of millions, a mere mockery of restraint. And accordingly as the opinions of these millions differ, they honor each other with the epithets of "serfs" or "anarchists." It is ridiculous to introduce such an idea as this into the discussion of a mere domestic institution. But since you have introduced it, I deny that the power of the slaveholder in America is "irresponsible." He is responsible to God. He is responsible to a world—a responsibility which abolitionists do not intend to allow him to evade—and in acknowledgment of which I write you this letter. He is responsible to the community in which he lives, and to the laws under which he enjoys his civil rights. These laws do not permit him to kill, to maim, or punish beyond certain limits, or to overtask, or to refuse to feed and clothe, his slave. In short, they forbid him to be tyranical or cruel. If any of these laws have grown obsolete, it is because they are so seldom violated that they are forgotten. You have disinterred one of them from a compilation by some Judge STROUD of Philadelphia, to stigmatize its inadequate penalties for killing, maiming, etc. Your object appears to be—you can have no other—to produce the impression that it must be often violated on account of its insufficiency. You say as much, and that it marks our estimate of the slave. You forget to state that this law was enacted by *Englishmen*, and only indicates *their* opinion of the reparation due for their offenses. Ours is proved by the fact, though perhaps unknown to Judge Stroud or yourself, that we have essentially altered this law; and the murder of a slave has for many years been punishable with death in this State. And so it is, I believe, in most or all the slave States. You seem well aware, however, that laws have been recently passed in all these States making it penal to teach slaves to read. Do you know what occasioned their passage, and renders their stringent enforcement necessary? I can tell you. It was the abolition agitation. If the slave is not allowed to read his Bible, the sin rests upon the abolitionists; for they stand prepared to furnish him with a key to it, which would make it, not a book of hope and love and peace, but of despair, hatred and blood; which would convert the reader, not into a Christian, but a demon. To preserve him from such a horrid destiny, it is a sacred duty which we owe to our slaves, not less than to ourselves, to interpose the most decisive means. If the Catholics deem it wrong to trust the Bible to the hands of ignorance, shall we be excommunicated because we will not give it, and with it the corrupt and fatal commentaries of the abolitionists, to our slaves? Allow our slaves to read your pamphlets, stimulating them to cut our throats! Can you believe us to be such unspeakable fools?

I do not know that I can subscribe in full to the sentiment so often quoted by the abolitionists, and by Mr. Dickinson in his letter to me: "*Homo sum humani nil a me alienum puto*," as translated and practically illustrated by them. Such a doctrine would give wide authority to every one for the most dangerous intermeddling with the affairs of others. It will do in poetry—perhaps in some sorts of philosophy—but the attempt to make it a household maxim, and introduce it into the daily walks of life, has caused many an "homo" a broken crown; and probably will continue to do it. Still, though a slaveholder, I freely acknowledge my obligations as a man; and that I am bound to treat humanely the fellow creatures whom God has entrusted to my charge. I feel therefore somewhat sensitive under the accusation of cruelty, and disposed to defend myself and fellow slaveholders against it. It is certainly the interest of all, and I am convinced that it is also the desire of every one of us, to treat our slaves with proper kindness. It is necessary to our deriving the greatest amount of profit from them. Of this we are all satisfied. And you snatch from us the only consolation we Americans could derive from the opprobrious imputation of being wholly devoted to making money, which your disinterested and gold-despising countrymen delight to cast upon us, when you nevertheless declare that we are ready to sacrifice it for the pleasure of being inhuman. You remember that Mr. Pitt could never get over the idea that self-interest would insure kind treatment to slaves, until you told him your woful stories of the Middle Passage. Mr. Pitt was right in the first instance, and erred under your tuition, in not perceiving the difference between a temporary and a permanent ownership of them. Slaveholders are no more perfect than other men. They have passions. Some of them, as you may suppose, do not at all times restrain them. Neither do husbands, parents and friends. And in each of these relations as serious sufferings as frequently arise from uncontrolled passions as ever does in that of master and slave, and with as little chance of indemnity. Yet you would not on that account break them up. I have no hesitation in saying that our slaveholders are as kind masters, as men usually are kind husbands, parents and friends—as a general rule, kinder. A bad master—he who overworks his slaves, provides ill for them, or treats them with undue severity—loses the esteem and respect of his fellow citizens to as great an extent as he would for the violation of any of his social and most of his moral obligations. What the most perfect plan of management would be is a problem hard to solve. From the commencement of slavery in this country, this subject has occupied the minds of all slaveholders, as much as the improvement of the general condition of mankind has those of the most ardent philanthropists; and the greatest progressive amelioration of the system has been effected. You yourself acknowledge that, in the early part of your career, you were exceedingly anxious for the *immediate* abolition of the slave trade, lest those engaged in it should so mitigate its evils as to destroy the force of your arguments and facts. The improvement you then *dreaded* has gone on steadily here, and would doubtless have taken place in the slave trade but for the measures adopted to suppress it.

Of late years we have been not only annoyed, but greatly embarrassed in this matter, by the abolitionists. We have been compelled to curtail some priveleges; we have been debarred from granting new ones. In the face of discussions which aim at loosening all ties between master and slave, we have in some measure to abandon our efforts to attach them to us and control them through their affections and pride. We have to rely more and more on the power of fear. We must in all our intercourse with them assert and maintain strict mastery, and impress it on them that they are slaves. This is painful to us, and certainly no present advantage to them. But it is the direct consequence of the abolition agitation. We are determined to continue masters, and to do so we have to draw the rein tighter and tighter day by day to be assured that we hold them in complete check. How far this process will go on depends wholly and solely on the abolitionists. When they desist we can relax. We may not before. I do not mean by all this to say that we are in a state of actual alarm and fear of our slaves; but under existing circumstances we should be ineffably stupid not to increase our vigilance and strengthen our hands. You see some of the fruits of your labors. I speak freely and candidly—not as a colonist who, though a slaveholder, has a master; but as a free white man, holding, under God, and resolved to hold my fate in my own hands; but I assure you that my sentiments and feelings and determinations are those of every slaveholder in this country.

The research and ingenuity of the abolitionists, aided by the invention of runaway slaves—in which faculty, so far as improvising falsehood goes, the African race is without a rival—have succeeded in shocking the world with a small number of pretended instances of our barbarity. The only wonder is that, considering the extent of our country, the variety of our population, its fluctuating character, and the publicity of all our transactions, the number of cases collected is so small. It speaks well for us. Yet of these many are false, all highly colored, some occurring half a century, most of them many years ago; and no doubt a large proportion of them perpetrated by foreigners. With a few rare exceptions, the emigrant Scotch and English are the worst masters among us, and next to them our northern fellow-citizens. Slaveholders born and bred here are always more humane to slaves, and those who have grown up to a large inheritance of them, the most so of any—showing clearly that the effect of the system is to foster kindly feelings. I do not mean so much to impute inhumanity to foreigners, as to show that they come here with false notions of the treatment usual and necessary for slaves, and that newly acquired power here, as every where else, is apt to be abused. I cannot enter into a detailed examination of the cases stated by the abolitionists. It would be disgusting and of little avail. I know nothing of them. I have seen nothing like them, though born and bred here, and have rarely heard of any thing at all to be compared with them. Permit me to say that I think most of *your* facts must have been drawn from the West Indies, where undoubtedly slaves were treated much more harshly than with us. This was owing to a variety of causes, which might, if necessary, be stated. One was that they had at first to deal more extensively with barbarians fresh from the wilds of Africa; another, and a leading one, the absenteeism of proprietors. Agents are always more unfeeling than owners, whether placed over West Indian or American slaves, or Irish tenantry. We feel this evil greatly even here. You describe the use of *thumb screws* as one mode of punishment among us. I doubt if a thumb screw can be found in America. I never saw or heard of one in this country. Stocks are rarely used by private individuals, and confinement still more seldom, though both are common punishments for whites, all the world over. I think they should be more frequently resorted to with slaves, as substitutes for flogging, which I consider the most injurious and least efficacious mode of punishing them for serious offenses. It is not degrading, and, unless excessive, occasions little pain. You may be a little astonished, after all the flourishes that have been made about "cart whips," etc., when I say flogging is not the most degrading punishment in the world. It may be so to a white man in most countries, but how is it to the white boy? That necessary coadjutor of the schoolmaster, the "birch," is never thought to have rendered infamous the unfortunate victim of pedagogue ire; nor did Solomon in his wisdom dream that he was counseling parents to debase their offspring when he exhorted them not to spoil the child by sparing the rod. Pardon me for recurring to the now exploded ethics of the Bible. Custom, which, you will perhaps agree, makes most things in this world good or evil, has removed all infamy from the punishment of the lash to the slave. Your blood boils at the recital of stripes inflicted on a man; and you think you should be frenzied to see your own child flogged. You see how completely this is ideal, arising from the fashions of society. You doubtless submitted to the rod yourself, in other years, when the smart was perhaps as severe as it would be now; and you have never been guilty of the folly of revenging yourself on the preceptor who in the plenitude of his "irresponsible power" thought proper to chastise your son. So it is with the negro and the negro father.

As to chains and irons, they are rarely used; never I believe except in cases of running away. You will admit, that if we pretend to own slaves, they must not be permitted to abscond whenever they see fit; and that if nothing else will prevent it these means must be resorted to. See the inhumanity necessarily arising from slavery, you will exclaim. Are such restraints imposed on no other class of people giving no more offense? Look to your army and navy. If your seamen, impressed from their peaceful occupations, and your soldiers, recruited at the gin shops—both of them as much kidnapped as the most unsuspecting victim of the slave trade, and doomed to a far more wretched fate—if these men manifest a propensity to desert, the heaviest manacles are the mildest punishment: it is most commonly death after summary trial. But armies and navies you say are indispensable, and must be kept up at every sacrifice. I answer that they are no more indispensable than slavery is to us—and to *you;* for you have enough of it in your country, though the form and name differ from ours.

Depend upon it that many things, and in regard to our slaves, most things, which appear revolting at a distance, and to slight reflection, would, on a nearer view and impartial comparison with the customs and conduct of the rest of mankind, strike you in a very different light. Remember that on our estates we dispense with the whole machinery of public police and public courts of justice. Thus we try, decide and execute the sentences, in thousands of cases, which in other countries would go into the courts. Hence most of the acts of our alleged cruelty which have any foundation in truth. Whether our patriarchal mode of administering justice is less humane than the assizes, can only be determined by careful inquiry and comparison. But this is never done by the abolitionists. All our punishments are the outrages of "irresponsible power." If a man steals a pig in England he is transported—torn from wife, children, parents, and sent to the antipodes, infamous, and an outcast forever; though probably he took from the superabundance of his neighbor to save the lives of his famishing little ones. If one of our well-fed negroes, merely for the sake of fresh meat, steals a pig, he gets perhaps forty stripes. If one of your cottagers breaks into another's house, he is hung for burglary. If a slave does the same here—a few lashes, or it may be a few hours in the stocks, settles the matter. Are our courts or yours the most humane? If slavery were not in question, you would doubtless say ours is mistaken lenity. Perhaps it often is; and slaves too lightly dealt with sometimes grow daring. Occasionally, though rarely, and almost always in consequence of excessive indulgence, an individual rebels. This is the highest crime he can commit. It is treason. It strikes at the root of our whole system. His life is justly forfeited, though it is never intentionally taken, unless after trial in our public courts. Sometimes, however, in capturing, or in self-defense, he is unfortunately killed. A legal investigation always follows. But, terminate as it may, the abolitionists raise a hue and cry, and another "shocking case" is held up to the indignation of the world by tender-hearted male and female philanthropists, who would have thought all right had the master's throat been cut, and would have triumphed in it.

I cannot go into a detailed comparison between the penalties inflicted on a slave in our patriarchal courts, and those of the courts of sessions to which freemen are sentenced in all civilized counties; but I know well that if there is any fault in our Criminal Code, it is that of excessive mildness.

ART. IV.—THE VALUE OF MONEY AND USURY.

IMPORTANCE OF LAWS LIMITING THE VALUE OF MONEY LOANED.

I CLAIM the liberty of being heard in your Review, as one of your subscribers, although I may espouse a doctrine which you may not approve, and may advocate sentiments varient from those of some of your present contributors. I shall do so, however, in all candor; and, while I claim to be regarded as maintaining the honest convictions of my own judgment, I take pleasure in acknowledging a similar purity of purpose in those who differ from me. I deem it altogether possible, that honest minds may entertain the sentiments put forth by your correspondent from St. Louis upon the subject of "Usury Laws and the Value of Money," but I am forced to believe it to be the result of education or avocation.

Infidelity is a doctrine which unlettered men are not apt to entertain. But it is sometimes not unacceptable to a certain class of cultivated minds, which have been raised an octave higher in intelligence than the mass of men, and who have, *as they say*, been elevated to a higher region of reason, and above the mists of prejudice and ignorance, and consequently are able to discern more clearly, and to discard with more boldness, the fetters which prejudice would hang around their minds. This is true in regard to usury. It is only among the educated, among the free thinkers, among that class who say they are able to look at things as they really are, among whom the dragon-watch of conscience has been lulled by the opiates of interest, or the pride of reason, or the desire to be above and aloof from the mad delusion of the vulgar populace, that this "monster of such hideous mein" has been embraced.

I ask you not to understand me as endeavoring to cast a slur upon those who advocate the repeal of the usury laws—that is no part of my design; but I pray you to permit me to give the full utterance of my deep conviction, that the doctrine which gathers around it so large a measure of the public disapproval, can never be successfully defended in the forum of conscience, or at the bar of reason. There must, I conceive, be some ground-work in the nature of morals, some principle inherent in man, some support derivable from just reason, for such universal and prevalent *feeling* on this subject as is known to exist *now*, and which has existed for so long a time.

This sentiment had its origin in the earliest ages of man's history, and is full, and deep, and undimmed in the blaze of the present enlightened day. It is a stream which had its source in the waste of semi-barbarism—as far back as written records go, running through Heathen and Christian nations, obtaining among every people, prevailing with every character of minds, from Moses and Aristotle among the ancients to Domas and Pothier and Kent among the moderns, keeping pace with civilization, unobscured when almost every moral light was extinguished in the dark ages, and now at this day no less universal—no less omnipotent in the halls of legislation than when nestling warmly in the bosoms and hearts of the virtuous and the good. It almost stands alone like Adam's recollection of his fall—having no equal in the public mind and uneclipsed by any other feeling. Like the pyramids of Egypt, it stands against the finger of time and the tooth of enemies who would obliterate it. Like religion, though it may retire from cities, and from the hum of traffic, and from hearts whose god is gain, it lives in undying strength among the pure and uncorrupted. Who can look upon this long, unvarying and consistent opposition to usury, without at once admitting that it is a part and parcel of man's moral nature—a principle ingrafted in his moral mechanism—a fundamental root of the natural law which reason cannot eradicate, and which education cannot wholly destroy.

The celebrated Dr. Brown, in endeavoring to maintain the doctrine that men were not wholly influenced by selfish motives, supported his view of the subject by insisting that men very often performed purely virtuous actions from an instinct of nature—from an original principle of being which could not be regarded as the result of any process of ratiocination—by which they arrived at the result, that the actions thus performed would be beneficial to them or not: that if a man saw another falling, or if he saw a blow aimed at another, an involuntary action of the mind ensued which prompted the beholder to prevent the fall and to arrest the blow so suddenly, as to show that the feeling sprung from an original principle of kindness, implanted in his nature, and was neither put into action by any deduction of mind based upon selfish considerations, nor wrought out for the occasion in the laboratory of reason. So I contend, the opposition to usury springs from an original principle of our nature, and like the colors in the changeable silk, in which it is impossible to tell where the one begins and the other ends, and of which you can only get rid by the destruction of the materials.

There is a peculiarity in the restriction imposed upon the Jews by Moses, by which they were forbidden from taking usury from each other, which is not frequently noticed. It is that there is appended to it an express promise. It is very similar to the injunction to honor thy father and thy mother; as an obedience to that natural law has appended to it a promise of long life. So there is a promise that when they should be finally settled in the promised land, they should succeed in the various avocations of life to which they might resort. A promise of success in business, which was made to depend upon obedience to the inspired injunction. We judge from the importance and solemnity which this promise brings to the injunction, that it was a matter of no small importance with the Lawgiver. There is no admission upon the part of the Jewish Lawgiver, that seems by any fair deduction to warrant the belief that it was not a violation to take usury from strangers. It was permitted to the Jews by Moses upon the same principle, doubtless, that polygamy was allowed—upon account of the hardness of their hearts and the stupidity of their minds—and cannot fairly be adduced to show that Moses did not altogether condemn it in the face of his express law to the Jews, coupled with so important a promise. Some persons have contended that Moses was not inspired when writing upon political subject, when his policy comes in the way of a favorite dogma.

There is an argument drawn from the pages of Holy Writ, which is of recent origin, that is not more an open and manifest distortion of the solemn truths of the divine oracle, than a conceded and clear acknowledgement that an argument drawn from such a source, or a sanction from that quarter, would be hailed with the greatest delight. But *there* either will be hunted for in vain. The argument is drawn from the parable of the traveler into a far country, recorded in the twenty-fifth chapter of Mathew: "It is surprising [so goes the argument] that learned Christians should overlook the parable of the talents, in which the servant who did not put out his talent to the *exchangers* in order to receive it back with usury, was punished, by having it taken from him and given to the one who had made cent. per cent. by the loan of his." Here is a commentator of a new school.

There can be no question that the Savior made use of that figure or parable, for the purpose of educing from it an important principle. It was his custom to use facts and circumstances familiar to his hearers to inculcate spiritual instruction. It was no part of his intent to give any particular sanction to the *facts* and *circumstances* which he used *for another purpose.* He made use of that parable to inculcate the necessity of industry in religion. He used those sensible objects and scenes familiar to his hearers, to impart and to enforce the moral truth that the party to whom is given any measure of mind or grace, is to improve it, not to fold it in a napkin and let it lie idle. If the same mode of argument were used with regard to the other parables, what a beautiful jumble and hotchpotch of morality would be inculcated in the Bible. It would teach the necessity of husbandmen going into a far country, "to sow seed in stony and thorny places"—not to "take away the tares" from among our wheat fields: to take "five wise and five foolish virgins to go out to meet the bridegroom," and would prohibit the "loaning of oil."

But *there is* scripture on this subject which it will not do to forget, among persons so fond of it. It was when our Savior made a scourge of small cords, and overthrew the tables of the money changers, and drove them violently from the Temple, and called them thieves: "*Ye* have made it a den of thieves." Usury, in the original sense of the term, meant the taking of any interest on the loan of money. This is the extreme of a very wise doctrine. It is the principle of repugnance to the taking of interest run to its extreme limit. It is the vibratory motion of the pendulum, when first started, before it settles to its appropriate career. It was only by the gradual steps of progressive improvement that the true development of the principle was finally reached. So it has been with many other of the principles of the natural law. The principle of ownership in property has undergone as many alterations, and has vibrated from one extreme of its utter denial to the other of its most inflexible administration, as often as the principle of usury. Like other of the natural laws, that it commenced in partial error, is no proof that the germ is not a true one. That it has undergone a variety of changes, that it has been rejected here, and adopted there, assimilates it more closely to other natural principles that have run the same gauntlet. To condemn it, because, to subserve some special purpose in the Jewish nation, it was carried to its extreme limit, would be to condemn by the same course of argument many of the wisest maxims which now regulate the social intercourse of men. It would be no uninteresting inquiry for the philosophic mind, to trace this, together with many other principles now universally acknowledged, to their original source; and so down through the various changes through which they have gone, thus tracing the gradual ripening of man's intellect from partial barbarism to a more enlightened day.

The denial of all right to take any, the least interest for the use of money, commencing with the sanction of the Jewish Lawgiver, and sustained by the Aristotelean philosophy, gradually gave way until the true basis was established in the regulations now prevailing in the code of every enlightened nation—the basis of a legal standard against the evils which grow out of the unlimited power of the money-lender, to take whatever he could exact from the necessities of the borrower, established long anterior to, but finally systematized and arranged by Adam Smith. The improved condition of the intelligence and morality of mankind, has introduced a regulation in lieu of the total restriction which existed in the dark and unmitigated severity of ancient times, by which a certain rate of interest is allowed to be taken which is measured upon the great principles of justice and right, measured by the probable amount of benefit which the act of loaning is likely to bestow upon the needy borrower. The body politic, in this instance, acts as the custos moralis of the individuals composing it, fixing the rate of interest consonant to justice upon the same platform of principles, upon which it proceeds when it enacts laws against the other natural rights of individuals for the good of the community. The law-making power has in various instances interposed between the various members which compose the body politic, for the purpose of protecting the ignorant and the unwary against the power and vices of the designing and the informed. We find this right on the part of the law-making power used in innumerable instances, which men at this day recognize as just and proper, though it infringes the natural rights of individuals to do what they please with what they may call their own. All government is built upon the infringement of the natural rights of individuals found necessary to the end of good government. All laws which are in existence are more or less an abridgement of the natural rights of individuals. The legal restrictions which are placed upon individuals, by which their natural rights are restrained within certain limits supposed to be for the common good, are found in those laws which restrain men from vending poisons, except upon conditions—from vending spirituous liquors, except under certain restrictions, and indeed in all the restraining statutes found in the code of every people. I will enumerate a few.

All laws requiring parties to reduce their contracts to writing. All laws preventing the owner of animals from exercising cruelty upon them. All laws affecting quarantine regulations. All game laws. All gallon laws. All laws rendering contracts founded upon gross inadequacy of consideration invalid. All *ne exeat* laws. All laws limiting the duration of daily labor. All Sabbath regulations. All proceed upon the admitted right existing in the great body of the nation, to prevent individuals from violating the taste, the judgment, and morality of the public at large.

I have the unquestionable *natural right* to flay my horse alive, if I choose to do so, in the streets of a city, as well as the country. And yet I have not the *legal right*—because I have no right to violate the sensibilities of others. Suppose that many of us have a friend, who has been fleeced by a wily usurer; are not the public sensibilities outraged? And have we no right to call upon the law-making power to interpose to prevent the repetition of similar acts, so well calculated to put the demon in our hearts? Interest is the compensation which the borrower pays to the lender, for the profit which he has the opportunity of making by the use of the lender's money. (Smith's wealth of nations) The borrower who runs the risk, and takes the trouble of using it, is surely and naturally entitled to a part of that profit, the other rightfully going to the lender. There is a difficulty in fixing, by general and universal laws, that just proportion which the legal rate of interest ought to be, as compared with the market value of money; because the latter varies with the changes and mutations of the ever-shifting profits of trade. It not unfrequently happens, it is admitted, that the borrower makes of the lender's money much more than the legal rate of interest. It not unfrequently happens, also, that the borrower is rendered bankrupt by the loss, not only of all the profits, but of the entire sum borrowed.

It is this inherent difficulty in the adjustment of the legal rate of interest, with a due reference to the market value of money, which it is admitted is constantly changing, that the advocates for the repeal of all laws upon the subject, have made copious use of for declamation and argument. It is the burden of their song. It would be well to remember that perfection characterizes no human regulation. All that is sought, is an approximation to it. If the argument were a just one, that the statutes upon usury do not meet every case which may arise amid the multiplicity and variety of money transactions of men—that they do not meet every shade of mutation which characterizes human affairs—and were a sufficient ground to justify the law-making power to repeal all laws upon the subject, it would be equally efficatious in obliterating from the code every statute contained in it. These gentlemen are not satisfied with any thing short of perfection. They are wholly unwilling to act upon the maxim that half a loaf is better than no bread.

If the remark of Chancellor Kent is a just one, that we ought not to stretch and to amputate in order to make our institutions fit exactly to any *theory*, neither ought we to abandon a general law because it does not meet every conceivable variety of circumstance. This argument, with the advocates for the repeal of all usury laws, is only second in importance to the one which is drawn from the abuse of the existing laws: because those laws are evaded, therefore they ought to be repealed. Is this just reasoning? Is not the maxim a wise one, that *ex abusu non arguitur ad usum*—no argument against the use of a law can be fairly drawn from its abuse. Lawgivers have heretofore seemed to proceed upon the idea that the ordinary profits of money ought to be divided between the lender and the borrower—half to the lender who risks the loaning of the capital, and half to the borrower who insures it to the lender and runs the risk of the insurance and takes the trouble of employing it. But later laws have not followed altogether this idea. There has been a yielding to the demands of trade, in so far as to fix the rate of interest upon loaned money *bona fide*, at the highest amount of profit commonly made by the employment of money in the ordinary business of life. Proceeding upon the supposition that the lender may, if he chooses, take all the profit which the ordinary employment of money may bring, and leaving the parties to contract within that limit, and guarding the borrower from further injury than the return of the principal and all the profits ordinarily made in the course of trade.

The lender has certainly no cause of complaint here. But they are unwilling to see any laws enacted which interfere with the personal liberty and discretion of the poor borrower. He seems to be the object of their tender mercies. If he sees an occasion where he can make a profitable trade by paying for borrowed money more than the legal rates would sanction, they do not wish him crippled in his natural right to do so, if he sees proper.

But run this argument out with its ligitimate conclusions, and whither will it carry you? Will it not sanction the taking of compound interest, when the rate of interest agreed upon is not paid at the time stipulated. Will it not make it necessary for courts of justice to enforce the penalty of bonds which are now declared to be only nominally forfeited. And so far as the borrower is concerned, there can be no difference, *as to him*, whether he borrows from a corporation or from an individual. If men who are indebted to corporations or individuals happen not to be ready at the day of payment and were placed at their mercy to take from them, for an extension of time, all the interest which the advantages of their situation might enable them to exact, how long would we be without our *mons sacer*. As Kent says, "there would not be strength enough in the government to support the administration of justice." The general mode of ascertaining whether a law is wise or not, is to look at its result. If a law fixing the rate of interest at such an amount as to put all the capital of the country into the channels of trade, preventing the hoarding it on the one hand and the undue usurious use of it on the other, it is certainly a wise law. It is unquestionably the interest of the *State* that every individual should use his own money. So far as the State is concerned, it would certainly be the policy to put every bee in the hive at work. This ought, doubtless, not to be lost sight of, in determining the question of interest. But this cannot always be done. Then the next step is, as there *will be drones in the hive*, so to legislate as to put the capital, which may be in their hands, into the hands of those who will use it, upon equitable principles, measuring fair justice to both parties.

If, in fixing the rate of interest, the Legislature move this mass of inactive capital into the channels of trade, upon terms reciprocally beneficial to lender and borrower, without giving an undue advantage to the one to oppress the other, and not so grossly unjust to the lender as to induce him to hoard, or resort to usury ordinarily, a wise medium has been obtained, which every patriot will hail with delight. In the enactment of all laws the greatest good of the greatest number should never be lost sight of. Individual instances of oppression, and individual instances of its violation, should not deter the Legislature from the enactment of a law *generally wise*. The advocates for the repeal of all laws upon the subject of usury, are too much like the artist who painted the one-eyed prince in *profile*—they look only upon one side of the picture. These advocates seem to think that if they can refer to the reason for usury laws given by Aristotle, they have gained the victory—that money was naturally barren, and that to make it breed money was a perversion of the ends of its institution: a very unwise reason may be given by a very wise man, for a very wise law. They contend that the remark applies equally to the rent which is taken for houses, as they also are affected with an incurable barrenness. But is there no difference between these? Houses are the fruits of the actual labor of man's hands—are of perishable materials—are not used as a circulating medium—run not into the speculations of trade—do not measure the value of other things—have no representative which the holder can secretly use for the purposes of oppression, and are of such a nature that the public eye can see the transactions in reference to them. But I do not press this view; because it is useless, as proper interest is allowed.

Among the various causes which gentlemen urge for the repeal of all laws with reference to interest, none are more conspicuous than those which tend to vary the value of money. Among these is the amount of disposable capital in the country seeking investment; or, in other words, the number of individuals in a community who prefer that other people should use their money. The path of the Legislature is very plain. In the first place, have in view the great principle that laws ought to be framed *primarily* so as to induce every member of the community to employ his own money. The individual who does not employ his capital himself should be regarded as derelict, and consequently not entitled to the especial regard of the Legislative power. I know that it is commonly regarded as demoralizing, to contend that the debtor and not the creditor should be the pet of *legislation*. The contrary opinion which has continued for so long a time, and which money has bought for its holders, has been carried to such an extent, that a debtor has been considered as little better than a felon. The true principle is, so far as legislation is concerned, and the good of the mass of the people, the interest of the body politic, the greatest good of the greatest number, that, if the legislation should lean to either, it should be toward the class of debtors. For the reason that in proportion as *legislation* (I emphasize the word *legislation*, because I wish to be correctly understood) leans toward the debtor, *it lessens the number of them*—and as a consequence you set the drones to work. I speak here of legislation as preceeding contracts.

In the second place, it ought to be the aim of the Legislature to fix the rate of interest, in view of the amount of disposable capital—in view of all the considerations connected with it—rather than that, because there are difficulties in the way, it should be abandoned altogether. Legislation *has* proceeded upon these grounds. We find from Hallam that, in the middle ages, interest was much higher than it is now. In 1228, at Modena, it was twenty-five per cent. In France, during the reign of

Henry III, it was thirty per cent., and by an edict of King John, in 1360, persons were allowed to lend money for interest as high as eighty-six per cent. In Holland interest is three per cent. In France interest has been as low as two and a half per cent. Cicero informs us that in the Roman provinces it was carried as high as forty-eight per cent., while in the city it was twelve. In China the rate of interest has been as high as fifty per cent., now it is four. In England it has varied from ten per cent., with which it commenced in the time of Henry VIII, to five per cent. It is not pretended that these several statutes are all right. But it proves incontestably that there was a necessity for some law upon the subject, and that the law-making power sought to have it a correct one.

In Rome, at one time, interest was as high as twelve per cent., but so great was the outcry that it was reduced to one per cent., then to half of one per cent., and finally *abolished altogether.* The consequence of all of these extreme measures was, that usury and extortion prevailed to a freightful extent, and it was only after a just medium was reached that the public mind quieted down. I presume to speak somewhat oracular, some what ex cathedra, because I have resided in this State when there was a constitutional prohibition against any Legislative enactment on the question of interest on the bona fide loan of money. Those who have never lived in a community in which all laws were repealed upon the subject of interest, and where men were allowed all the interest they could wring from the borrower, have no idea of the state of things that is the result. It is to them a *terra incognita.*

Chancellor Redisdale has remarked, that if every man could obtain for the loan of his money as high a rate of interest without hazard, as they who do employ it in trade and manufactories, which are hazardous undertakings, no man would employ his money in such hazardous undertakings: the most industrious of the people would be ground down by the usurers, who would get the profits of trade, and the enterprising and industrious trader would be ruined. There is therefore nothing clearer to my mind, than that in a commercial country the statute of usury should be strictly enforced. When the Legislature allows the lender to take as much interest as can be made in hazardous enterprises, you make him the pet of legislation, you ruin the trader, and cripple commerce. I speak of money bearing interest, other than bona fide loaned money. The law seems to make a distinction, very wisely, between bona fide loans of money, where the parties are allowed to contract within the limit of the full amount of profit derivable from the ordinary business of the country, proceeding, I presume, upon the ground that rare instances may occur in the case of direct borrowing, where the borrower may make out of the borrowed money more than is usually made in the ordinary avocations of commerce and trade, and instances where money not bona fide borrowed bears interest. In the latter case the Legislature seems to divide the profits.

There seems to be no justice in the complaint against the laws upon the subject of borrowed money upon the part of the lender, when the legal machinery, put into existence by the law-making power, is made to subserve his ends so far as to enable him to exact from the borrower an amount of interest, which, by the wisest opinion of the public, is regarded as the full profit derivable from the ordinary employment of money. It is an argument with those who advocate the repeal of the usury laws, that all the evils which have grown out of those laws would die upon their abrogation. "The repeal of the law," say they, "would of *course* correct all the evils that have followed in its train. The support being taken away, the superstructure must fall." Men do not run counter to the prevailing feelings and sense of justice and fairness upon the subject of interest, simply for the delight of doing so. There must be some *motive* more potent than the mere pleasure of outraging the public judgment of fairness. If men now, with a legal prohibition in their way, are willing to violate the law to indulge a peculiar feeling, would not that feeling run riot if the prohibition were withdrawn? The commercial mind, when brought to the investigation of this subject, like light through a colored glass, paints images which are not true to nature, giving an undue and consequently a false coloring to the face of transactions, an undue importance to principles and views, which its peculiar avocation brings prominently upon the tapis of their mind. The commercial judgment, not being well balanced on this subject by having the scales properly adjusted, does not look down from the vantage ground, which law-makers should occupy upon the great plain of life, but permits a prejudice peculiar to its situation, to suffocate, like a deadly nightshade, the virtue of disinterestedness.

Justice Turner, formerly of the supreme bench of this State, stated "that the constitution of the State of Mississippi, made in 1817, prevented the General Assembly from interfering with whatever rate of interest might be agreed between the parties for the bona fide loan of money." What was the consequence, I can safely appeal to our citizens upon the point. The result is seen in the restrictive enactments which are to be found in the Poindexter code of 1822. "*Experience*," says Justice Turner, "in the case of the Planters' Bank vs. Snodgrass, *proved* that it was best to establish a *certain rate of interest*, owing to some abuses which were practiced upon the *unwary and necessitous*," "such as the loan of a dollar at the rate of twenty-five cents a day—such a case occurred in Lawrence County." St. George Tucker, in his Commentaries, says, when speaking upon the subject of usury, "five per cent. a month, it is said, have been frequently given—half that rate for a week, and even one per cent. a day, has on some occasions been offered and accepted. It is easy to perceive that no honest commerce could long support such a defalcation from its profits. Accordingly, numerous bankruptcies have taken place, particularly in those parts of the United States where there was the greatest quantity of money in circulation." "Where it possible," says he, "for the laws to restrain this evil, nothing would be more worthy the attention of a wise legislature, than to purge a state from the corruption which the projects, the rapacity, and the frauds of the avaricious speculators, swindlers, land-jobbers, and usurers *infallibly produce*." A moderate interest is the life of commercial credit. "Nor is excessive usury more inimical to every species of honest industry than it is to the moral conduct of men. The heart that is once corroded by avarice becomes callous to generosity and friendship, obdurate against the cries of distress, regardless of justice, insensible to every impulse or passion, except only the insatiable thirst of amassing."

ART. V.—GREAT COMMERCIAL ADVANTAGES OF THE GULF OF MEXICO.

RIVER BASINS OF THE GULF AND CARIBBEAN SEAS; THE GULF STREAM; THE MISSISSIPPI AND AMAZON RIVERS; RIVERS OF THE OLD AND NEW WORLD; BOUNTIES OF NATURE TO AMERICA; INFLUENCE OF RIVERS AND THEIR COURSES UPON COMMERCE AND THE DESTINIES OF A PEOPLE; CONNECTION BETWEEN THE PACIFIC AND ATLANTIC OCEANS.

[We extract from an able paper, from the pen of Lieut. Maury, U. S. Navy, which appeared last summer in the Richmond *Literary Messenger*, the following, which deserves, from its peculiar interest, to be studied by all of our readers. We feel in duty bound to give it circulation, and are assured of its favorable reception everywhere.—Ed.]

A line from the Delta of the Orinoco to the east end of Cuba, is but a thousand miles long; and yet, to the west of it, lies this magnificent basin of water, locked in by a continent that has on its shores the most fertile valleys of the earth; in the midst of these valleys, ships may sail thousands of miles, on the largest rivers that bring tribute to the ocean. They contain the elements of dormant wealth, of national power and greatness, which it requires facility of communication with the Pacific to begin to develop, and which, when fully developed, will astonish the world. An era and an epoch in the affairs of nations, will date from the opening of this communication. All, and more too, that the Mediterranean is to Europe, Africa and Asia, this sea is to America and the world.

A sea is important for commerce, in proportion to the length of the rivers that empty into it, and to the extent and fertility of the river basins that are drained by it. The quantity and value of the staples that are brought down to market, depend upon these. The Red Sea is in a riverless district; few are the people and small the towns along its coast. Its shores are without valleys, not a river emptying into it; for there is no basin for it to drain. Commercially speaking, what are its staples in comparison with those of the Mediterranean, which gives outlet to rivers that drain and fertilize basins containing not less than one million and a quarter of square sea miles of fruitful lands?

Commercial cities have never existed on the shores of the Red Sea. Commerce loves the sea, but it depends, for life and health, on the land. It derives its sustenance from the rivers, and the basins which they drain—and increases the opulence of nations, in proportion to the facility of intercourse which these nations have with the outlets of such basins.

The river basins drained into the Gulf and Caribbean Sea, greatly exceed, in extent of area and capacity of production, the river basins of the Mediterranean. The countries in Africa, Asia and Europe, which comprise the river basins of the Mediterranean, are, in superficial extent, but little more than one-fourth the size of those which are drained by this sea in our midst. It is the Mediterranean of the new world, and nature has laid it out on a scale for commerce, far more grand than its type in the old: that is about 45° of longitude in length, by an average of 7° of latitude in breadth. Ours is broader, but not so long; it is, therefore, more compact; ships can sail to and fro across it in much less time, and gather its articles of commerce at much less cost.

The two seas cover each about the same superficial extent, but from one extreme to the other of that of the old world, the route is tortuous and the voyage long; it cannot be accomplished without sailing a distance quite equal to that between Europe and America. Whereas, from the most remote point in the Caribbean Sea to the furthest port in the Gulf, a straight line may be drawn on the water, and the distance from one extremity to the other of it, will be little more than two thousand miles.

From the ports of the Levant and Black Sea to the ocean, a vessel, under canvas, requires a month or more; but from any point on the coast of this central sea of America, a vessel may be out upon the broad ocean in a few days. Winds and currents, with all the adjuvants of navigation, are here much more propitious to the mariner, than they are in any other part of the world.

There is a system of perpetual currents running from the ocean into this sea, and from this sea back into the ocean. They are literally rivers in the sea, for they are as constant and almost as well marked as rivers on the land.

Had it been left to man to plan the form of a basin for commerce on a large scale—a basin for the waters of our rivers and the products of our lands—he could not have drawn the figure of one better adapted for it than that of the Gulf, nor placed it in a position half so admirable.

The shores of the Mediterranean are indented by deep bays and projecting points of land, which greatly lengthen the sailing distance from port to port. The sinuosities of shore lines add to the expenses of commercial intercourse. By land, the distance from Genoa to Venice is that only of a few hours travel; but by water they are more than a thousand miles apart. There are no such interruptions to navigation in the Gulf of Mexico. The shortest distance from port to port there, as from New Orleans to the ports of Texas and Mexico, to Pensacola, Havanna and the like, is by water.

The windings of the Mediterranean shore line, exclusive of its islands, measure twelve thousand miles; whereas, those of the Gulf and Caribbean sea do not mete out half that distance.

Ships, therefore, which go into the Mediterranean have—to gather the produce which is brought down from its river basins, containing less than two millions of square miles—to wind along a coast line twelve thousand miles in length; whereas those which go into the Gulf of Mexico may, by sailing five thousand miles, reach the mouths of rivers that drain, of water and surplus produce, more than four millions of square miles of fruitful plains and fertile valleys.

Easy access, by sea, to the mouths of rivers which drain extensive basins of rich land, has always been regarded as the best basis upon which the foundations of commerce can be laid. The character and extent of the back country which supplies such outlets, are the true exponents of the commercial prosperity of the cities, and of the condition of the people who live there. The closer these outlets are together, and the greater the diversity of the climates drained by them, the more numerous are their products, and the more active is their commerce. Hence, the commercial importance of every bay, gulf and sea of the ocean, may be considered as in direct relation to the extent, variety and fertility of their river basins.

Because the Red Sea is in a riverless region, it has no markets. Consequently it has, in the eye of commerce, ever been regarded as valueless, in comparison to the Bay of Bengal and the Mediterranean Sea, with their broad basins and beautiful tributaries.

Every one who takes the trouble to examine, is struck with the fact, that the greatest commercial cities of the world, are, and ever have been, those whose merchants have been most advantageously situated with regard to the outlets, natural or artificial, of great river basins and producing regions.

Rightly to perceive how admirably located and arranged for the purposes of commerce, are the Gulf and Caribbean Sea, and duly to appreciate the advantages arising therefrom, let us, before comparing the river basins of America with those of Europe and Asia, or before tracing further the effects which the course of the rivers of a country has upon its commerce, take a glance at the geographical position of this our central sea.

Curtained on the east by a chain of fruitful islands, stretching from Trinidad to Cuba, it is, on the north and the south and the west, landlocked by the continent which has bent and twisted around this sea, so as to fold it within its bosom, and hold it midway between the two semicontinents of the new world.

In this favored position, it receives, on one side, the mountain streamlets of a sea of islands; on another, all the great rivers of North America; and, on the others, the intertropical drainage of the entire continent.

The Atlantic ocean circulates through this our Mediterranean. Its office in the economy of the world is most important. It not only affords an outlet for the great American rivers, but it makes their basins habitable, by giving them drainage, and sending off, far away into the ocean, the drift and the over-heated waters which the rivers bring down. It also, through its system of cold and warm currents, makes its own shores habitable to man, tempers the climate of Europe, and, by its genial warmth, makes productive the soil there.

The Amazon, rising in the Andes, and emptying into the ocean under the line, also finds its way through the magnificent llanos and pampas of the tropics down to the margin of this sea.

In consequence of the Gulf Stream the mouth of the Mississippi is really in the Florida pass. The waters of the Amazon flow through the same channel. The great equatorial current of the Atlantic sweeps across the mouth of this river and carries its waters into the Caribbean Sea; from the Caribbean Sea they flow into the Gulf of Mexico, and thence by the Gulf Stream back into the Atlantic. Such is the channel through which the waters of the Atlantic complete their circuit and are borne back into the ocean again. The distance in a straight line from the mouth of the Amazon to the Florida pass is only twenty-four hundred miles. Therefore the Amazon may very properly be regarded as one of the tributaries, and its basin as a part of the back country, to this our noble sea.

The connection is even more close; for one mouth of the Amazon is that of the Orinoco, which empties directly into the Caribbean Sea. These two streams present the anomaly of two great rivers having sources that are common. A person sailing up the Amazon, may cross over into the Orinoco, and re-enter the sea through that river without having set his foot on shore or disembarked once. The Rio Negro takes its rise from the eastern slope of the Andes, and after having run several hundred miles, it divides itself into two streams, one of which flows into the Amazon, the other into the Orinoko. This is nature's canal between them.

The Mississippi and the Amazon are the two great commercial arteries of the continent. They are fed by tributaries, with navigable length of channel, more than enough to encircle the globe.

This sea, therefore, is like a heart to the ocean. Its two divisions of sea and gulf perform the office of ventricles in the system of ocean circulation. Floating bodies from the region of Cape Horn, from the coast of Africa and the shores of Europe, are conveyed into the Caribbean Sea, and thence into the Gulf of Mexico, whence its waters, supplied anew with heat and motion, are again sent forth, through their channels of circulation, over the broad bosom of the Atlantic. To western Europe, the heated currents of this sea distribute their warmth, and then return back to their sources through the invisible channels of the deep.

We have seen that the river basins of the Mediterranean cover but ittle more than one-fourth the area which is drained by the streams which empty into the central sea of America.

That we may realize the extent of these river basins of America, let us add to those of the Mediterranean the chief river basins of western Europe and southern Asia, and see then if they can out-measure the valleys drained by our Mediterranean alone.

Before doing this, however, we will take a glance at the geographical features and physical condition which regulate the size of the river basins to be considered.

It is a remarkable feature in the formation of this continent, that there are no great basins in the interior without sea-drainage, and no rainless districts of any considerable extent. With one or two exceptions, as the inland basin of the city of Mexico and the Salt Lake, which comprise but small districts of country, all the water courses of America empty into the sea. The extent of country for sea drainage here, is far greater than in any other part of the world. Hence, we have larger valleys, valleys that are longer and broader than any in the old world. Consequently, they collect more water, call for more drainage, and hence give rise to more and larger rivers. In the old world, there is a region of country, 80° of longitude by 17° of latitude in extent, in which it never rains. Here, between the Andes, and the Atlantic, there is no such rainless region. The annual fall of rain, between the tropics, in the old world, is six feet; in the new world it is eleven; and it is greater here than there in the temperate zones also. More than one-half of all the fresh water in the world is on the continent of North America. In facts like these, is found the explanation as to the cause of the surprising length and volume of many of the American rivers. Big rivers are required to drain broad valleys.

In Europe and Asia, the great continental declivities are such as to leave no room for any remarkable length of river or breadth of valley.

In North America, there is an immense valley between the Alleghany and the Rocky Mountains. The great lakes form the northern edge of this valley, the entire drainage of which is, therefore, carried off toward the south, into the Gulf of Mexico.

This is the basin of the Mississippi.

In South America, the Andes skirt the western coast very closely, and send off to the east a chain of mountains from Bolivia to the Atlantic coast of Brazil. These mountains divide South America into two great systems of river basins; the drainage of one is to the north and east, of the other to the south.

In the broadest part of the continent, therefore, which is its northern portion, the continental slope gives rise to the first mentioned system. The district of country included in it is an immense one, the rains are heavy, and the drainage great. Hence, the direction and volume of the Para, the Amazon and Orinoco. The basin which slopes to the south is much less in extent; it is drained by the La Plata. In one part of Europe the drainage is, in all directions, toward the Black Sea, which is sunk down in a sort of a basin of its own, and receives the drainage from several quarters. But the longest slope on the sides of this basin runs up west, toward the center of the continent. Here the Danube and other draining streams, which empty into the Black Sea and thence into the Mediterranean, take their rise.

On the shores of this last, we have the drainage to the south, which gives rise to the Rhone, etc. Europe has its Atlantic slope also, and there the rivers, as the Tagus, the Rhine and the Elbe, run west. Thus we see that the geographical features of Europe leave no room for a hydrological expression like that of the Amazon and the Mississippi, with their valleys.

In the interior of Asia there is a grand continental basin 85° of longitude in length. It is spread out over the middle of the continent, and extends from the borders of Europe to the eastern districts of China. It embraces a region of country more than four millions of square geographical miles in extent, which has no ocean drainage. In the midst of the old world, it is surrounded by steppes and mountain ranges which shut it out from the world of waters beyond. It gives rise to many large rivers, as the Volga and the Oural; but they empty into the Caspian, and other continental seas, which have no visible outlet or communication with the ocean. For all the great purposes of commerce, this immense and fertile basin is as blank as the desert of Zahara. Of course, then, the rivers above this basin must run north into the frozen ocean, which also is a blank as white as snow, in the book where commerce records her statistics. They embrace nearly four millions of geographical square miles.

On the south side of this inland basin, the inclination of the continental level, is toward the China seas and Indian ocean. Here, then, we must look for those river basins, and the origin of those streams, which give rise to the commerce of the East, and here, accordingly, we find the teeming valleys drained by the Euphrates, the Ganges and the Yangtse Kiang—all of which descend from fruitful plains, and all, except the last, are open to trade and traffic with "Outside Barbarians."

The distance from the Bay of Bengal and Arabian sea, to the southern edge of this great inland basin, varies from 3 to 10 degrees of latitude, consequently the climates, through which the rivers of India flow, are limited to 10 degrees of latitude; the produce that comes down these streams, for market, has no greater range of climate than that which is due a north and south line of five or six hundred miles in length. Neither can the rivers themselves be very long, nor their basins very broad, nor their volume of waters very great. Their valleys may vie, in fertility, with those of the Mississippi and the Amazon, but as for diversity of climate, variety of productions and navigable capacity of water courses, there is no comparison.

Let us now return to the comparison as to extent of river basins of the old world with those under consideration in the new.

According to one of the most remarkable works of the age—Professor Johnson's Physical Atlas—the river basins in the old world contain, in geographical square miles, stated in round numbers as follows, viz:

Of Mediterranean Europe,	1,160,000	square miles.
Nile,	520,000	" "
Euphrates,	196,000	" "
Indus,	312,000	" "
Ganges,	432,000	" "
Irrawady,	331,000	" "
Others of India,	173,000	" "
Those of Western Europe, as Rhine, etc.,	730,000	" "
Total Mediterranean, India and Western Europe,	3,854,000	" "

AREA IN GEOGRAPHICAL SQUARE MILES OF RIVER BASINS DRAINED INTO THE GULF OF MEXICO AND CARIBBEAN SEA.

Basin of Mississippi river,	982,000	square miles.
Basins in Florida and Texas (estimated),	529,000	" "
" Mexico and Central America (estimated),	300,000	" "
" Amazon,	1,796,000	" "*
" Orinoco and all others of Caribbean Sea,	700,000	" "
Total Gulf and Caribbean Sea,	4,298,000	" "
Total Mediterranean, India and Western Europe,	3,854,000	" "

Difference—call it nothing, though it measures an area containing nearly half a million of square miles.

From this statement, we are led to the very remarkable conclusion—and it is an important physico-commercial fact—that the area of all the valleys which are drained by the rivers of Europe which empty into the Atlantic, of all the valleys that are drained by the rivers of Asia which empty into the Indian ocean, and of all the valleys that are drained by the rivers of Africa and Europe which empty into the Mediterranean, does not cover an extent of territory as great as that included in the valleys drained by the American rivers alone, which discharge themselves into our central sea. Never was there such a concentration upon any sea, of commercial resources. Never was there a sea known with such a back country tributary to it.

The produce which comes down the rivers of Europe, has, when it arrives on the shores of the Atlantic, to be transported 15 or 20,000 miles, to be exchanged for that which comes from the river basins of India. From the mouth of the European rivers discharging into the Atlantic ocean, the voyage to the mouth of the Asiatic rivers which run into the Indian ocean, often occupies 200 days; consequently, it requires a ship more than a year to take on board a cargo from the river basins of Europe, go with it to India, exchange it, and return with the proceeds thereof to the place whence she started—so great the distance and so long the period of time which separate these two fountains of commerce.

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* Including the basin of Para.

One ship, therefore, trading between the American system of river basins, may fetch and carry, exchange and bring back, in the course of one year, as many cargoes as ten ships can, in the same time, convey between the remote basins of the system in the old world.

The products of the basin of the Mississippi, when they arrive at the Balize, may, in 20 or 30 days, be landed on the banks of the Orinoco and Amazon. Thus, in our favored position here in the new world, we have, at the distance of only a few days' sail, an extent of fruitful basins for commercial intercourse, which they of the old world have to compass sea and land and to sail the world around to reach.

On this continent, nature has been prodigal of her bounties. Here, upon this central sea, she has, with a lavish hand, grouped and arranged in juxtaposition, all those physical circumstances which make nations truly great. Here she has laid the foundations for a commerce, the most magnificent the world ever saw. Here she has brought within the distance of a few days, the mouths of her two greatest rivers. Here she has placed, in close proximity, the natural outlets of her grandest river basins. With unheard of powers of production, these valleys range through all the producing latitudes of the earth. They embrace every agricultural climate under the sun; they are capable of all variety of productions which the whole world besides can afford. On their green bosom rests the throne of the vegetable kingdom. Here commerce, too, in time to come, will hold its court.

The Mississippi comes down from the grain producing regions of the North, bearing vessels deeply laden with produce; freighted with all varieties of the fruits of the temperate zones; they convey to the sea large cargoes of merchandise, gathered from the products of the field, the forest and the mine. Hills of iron, mountains and valleys filled with coal, are found on its banks. Its waters are mingled, in the Gulf, with those of the Amazon and Orinoko, which run between the tropics. From their basins they are ready, at the bidding of civilized man, to place on this sea, in all variety and abundance, the products of the torrid zone. Arrived in the Gulf with these goods, the mariner then finds a river in the sea to speed him on with its favoring currents to prosperous voyages. Through the Gulf stream, the productions of this grand system of river basins will be distributed over the world, passing by and enriching as they go, Norfolk, Philadelphia, New York and Boston, all the Atlantic slope, and all the Pacific slope, too, of the United States.

From 50° north to 20° south, the Mississippi and the Amazon take their rise. A straight line from the head waters of one to those of the other, measures a quadrant of the globe. They afford outlets to all the producing climates of the earth. Upon this Gulf and sea, perpetual summer reigns; and upon their shores, climate is piled upon climate, production upon production, in such luxuriance and profusion that man, without changing his latitude, may, in one day, ascend from summer's heat to winter's cold, gathering, as he goes, the fruits of every clime, the staples of every country.

To gather such things in the old world, commerce must first plume her wings and sail in search of them through all latitudes and climates, from the extreme north to the furthest south.

In the small compass of the West India sea, are crowded together the natural outlets of tho ocean, from mountains, plains and valleys, that embrace every variety of production, every degree of latitude and climate, from perpetual winter to eternal spring. The largest water courses of Europe and India, do not run through more than 10° or 15° of latitude. The greatest variety of climate possessed by the river basins of India, the Mediterranean and Atlantic Europe, is included between 10° and 55° of north latitude. Only forty-five degrees of latitude there against 70° here. There they are all in the same hemisphere, and when it is seed time in one basin, it is seed time in all; and short harvests there produce famine. Here, in the American system, we include both hemispheres—and therefore, when it is seed time in one basin, it is harvest in the other.

With this blessed alternation of seasons, so near at hand, and so convenient to our great seaport towns, and avenues of trade, famine on these shores is impossible. With this American sea between the two hemispheres, and in the lap of both, nature has endowed it with commercial resources and privileges of infinite variety. Here come together and unite in one, the natural highways to the ocean, from mountains, plains and valleys teeming with treasures from the mineral, the vegetable and the animal kingdoms—nature's most princely gifts to man.

Were it given to us of this day, to look down through future generations, and to see the time when the valleys of the Mississippi, the Orinoco and the Amazon shall be reclaimed and peopled and cultivated up to their capacities of production, we should behold in this system of river basins, and upon this central sea of ours, a picture such as no limner can draw, no fancy can sketch. All the elements of human greatness which river, land and sea can afford, are here crowded together. For their full development, easy access to the Pacific is necessary.

The course of a river exercises important bearings upon commerce. A river that runs east or west, has no diversity of climate, its basin is between two parallels of latitude, and there is no variety of production from source to mouth, except such as is due to elevation. The husbandman who inhabits the banks of such a stream, when he descends it with his surplus produce for exchange or barter, finds, on his arrival at its mouth, that he has but come to New Castle with coals only. He is there offered duplicates in exchange for what he has brought to sell; all sellers and no buyers never can make commerce brisk. Such a river may have a staple, it may be corn, it may be oil, but whatever it be, it is all they who dwell in its valley have to sell, and whatever they buy they buy with that staple. The commerce of such a basin therefore must be with other latitudes, with other climates and with regions which afford *variety*.

On the contrary, one who descends a river that runs north and south, finds his climate changing day by day; at every turn new plants and strange animals meet his eye. He brings with him from its head-waters the furs, the cereal grains, and a variety of articles—productions of the north—to exchange for the coffee and sugar and the sweets of the south, which are gathered on its banks below.

It is the business of commerce to minister to the fancies as well as the necessities of man; she therefore delights in variety of climate and assortments of merchandise. It is owing to the diversity of climate and production afforded by the States of this Union, and to the facilities of intercourse with them, that the trade of a single State, as Massachusetts, with the rest, exceeds in value the entire foreign commerce of the whole country with all the world besides. The pursuits of commerce abound in secrets of high import to the happiness of man; an easy communication from the Gulf to the Pacific is the key to some of them.

The products of seventy degrees of latitude are to be found in the river basins drained by this central sea. All nations want of them; but the 600 millions of people who live on the shores that are washed by the Pacific ocean, are excluded from them. They are barred out from this great *Cornu Copia* of the world, by a strip of land but a span in breadth. From the mouth of the Amazon, and the Delta of the Mississippi, to the Isthmus of Panama, the distance in each case is less than two thousand miles. Shall this barrier forever remain in our way to the markets and the wants of six hundred millions of people? Let those who study the sources, and understand the elements, of true national greatness, ponder this question, while we consider the effects which the course of a river has upon the character of the people who inhabit its basin.

The most superficial observer remarks the effect which the course of a river has upon the flora and fauna that inhabit its banks; as the traveler ascends an east or west stream, he finds all the way up the same fish, the same beasts, birds and reptiles. There is as little variety among those as there is among the plants and herbage upon which they feed. But along rivers whose beds lie north and south, he sees, as he descends from source to mouth, entire changes in the families, species and genera, both of plants and of animals.

Can it be so, that climate which, with its multitudinous influences, so strongly impresses itself upon the vegetation of a country, upon its beasts, birds and fishes—upon the whole face of organic nature—should produce no effect, either upon the outer or the inner man? His habits depend, in an eminent degree, upon climate and soil, and these upon latitude; they operate upon his organization, and affect his appearance; else, whence the difference between the Caucassian and the Ethiopian? the Esquimaux of the north, and the Aztec of the south?

The frigid zone is a niggard, yielding scanty returns to labor; there, man is a beggar, and from the cradle to the grave, he has a hard struggle to snatch from the land and water the bare means of animal subsistence. He has no time for moral developments; his severe climate, with its consequently barren soil and stunted vegetation, taxes all his energies to make provision for the night of his long and dreary winter. It should not be forgotten that man, in the climate of severe cold, requires more food for sustenance than he does in the temperate regions; while, on the other hand, nature is much less generous in her sources of supply. These are based on the vegetation, which goes on decreasing in perfection and development from the equator—where its energies are most active—to the poles, where they are most torpid. The torrid zone is most favorable for the development of vegetable as well as for purely animal life. But for man, in the true nobleness of his being, the temperate zone is the place. Here he is neither pinched with hunger, nor starved with cold, as in the frigid, nor surfeited to plethora, as in the torrid zone. Extremes are closely allied, the abundance of one and the scarcity of the other of the zones, each tends rather to the development of the animal passions than of the moral attributes. The temperate zone is the happy middle for these. Here nature is not the severe task-master of the polar regions, nor the prodigal host of the tropics. She lures man to labor, and in the wholesome necessities of labor, he finds exercise and incentive to the intellectual being. Here he is surrounded with all the physical conditions most favorable to progress and improvement. Within the tropics he is enervated by the climate. Nature does not impose the necessity of severe toil there, but invites to luxury and repose; and in so doing, stimulates and excites the animal propensities at the expense of moral advancement.

The facts are curious and ought to be mentioned. Not only the temperate zones, but certain places in them, seem to be best adapted as the nurseries of civilization and Christianity, and therefore for the development of those faculties, attributes and qualities, which distinguish and ennoble the human race most of all.

These favored spots are secluded places; they have been, for the most part, surrounded by mountains, and separated from the world beyond by barriers difficult to pass. They are inland basins, the most striking peculiarities of which are, that they have no ocean drainage; their streams all empty into closed seas or lakes which have no visible connection with the great salt seas that cover two-thirds of the earth's surface.

When man was created in God's own image, he was placed in the garden spot of the earth, near one of these basins, and on the banks of a river that crosses parallels of latitude and runs through varieties of climate. Here he waxed strong and became wicked, and caused God to repent of the work of creation. Then the condition of things was changed: the earth was cursed for man's sake, and, after the flood, the ark was landed within an inland basin, which has since had no connection by water with the ocean.

The promised land of the Israelites is another inland basin. It is so good that, as a special mark of Divine favor, Moses was permitted to look down upon it and die. It is drained by the Jordan and other streams which are shut out from the ocean. Here Christianity had its birth.

For the want of natural barriers to make their country an inland basin, and to exclude them from liability to incursions from the savage hordes without, the Chinese built a wall, and under the shelter of that they attained the highest degree of civilization known among the ancients. Intercourse with the world, during the primitive ages, seems to have been unfavorable to the well-being and advancement of civilization.

It is remarkable that in the new world there should be but two inland basins, and they the spots where the aborigines had attained their highest degree of civilization. When compared with the whole continent, the area which these basins occupy is found to be quite inconsiderable as to size. Grants of land of larger extent, on the continent, have been made to single individuals. The Incas of Peru and the Aztecs of Mexico, each dwelt in inland basins. The basin of the sealed lake Titicaca is the only inland basin of South America; and, with the exception of the great salt basin, the basin of Mexico is the only one in North America from which there is no outlet to the ocean. Each of these basins is partly within the tropics, but their elevation above the level of the sea is such as to give them the climate, the flora and the fauna, with all the advantages and conditions of the temperate zones. More striking examples as to the effect of geographical conditions upon the character of man could scarcely be mentioned.

But civilization has now attained a growth which no longer requires the shelter of the mountains and their fastnesses to protect it from the rude shocks of savage man and his blighting passions. It now delights in free intercourse among nations, and flourishes best where commerce is most active and institutions are most liberal. The history of civilization in its early stages is that of a tender plant, which, while young, requires the protection and shelter of the hot-bed; but which, after it has attained a certain degree of vigor, thrives best in the open air. Since the transplanting of civilization from its secluded valleys, it has attained a vigorous growth; under its shadow liberty finds shelter, man safety, and nations freedom of intercourse. Its seeds and its fruits have been borne to distant lands on the wings of commerce. Its branches reach all parts of the habitable globe.

There is this further analogy: as the plant which has been nurtured in the green-house acquires the power to withstand the vicissitudes of the open field, the conditions of the nursery becomes less and less adapted to its habits and the promotion of its vegetable health. It cannot, therefore, after having acquired in the grove the magnitude and habits of the forest tree, flourish in the green-house again. It will pine away there and die, or at least it will cease to thrive. So with the moral and the intellectual culture of man. These inland basins seem to have been not only most favorable to its early development, but, after civilization acquired the strength to advance beyond its green-house in the mountains, it seems to have acquired organs and powers, for the unfolding and growth of which the conditions of secluded valleys were altogether unfavorable.

The people who now inhabit the river basin of the Jordan have fallen back into a semi-barbarous state. Neither can the basin of Mexico nor the shores of the Peruvian lake, any longer be considered as the seat of the highest degree of civilization in the new world.

Considering the small area of these inland basins in comparison with the extent of the whole earth, it cannot be that chance should have made them the nurseries of civilization. Effects here, as elsewhere, must have their causes; mere coincidences would be miraculous. It would be interesting, and profitable too, to trace out those physical conditions, cosmical arrangements and terrestrial adaptations peculiar to those places, and which must have been especially favorable for the development of those traits and attributes of man which, when fully matured, are destined, perhaps, to make him only a little lower than the angels of heaven.

"As the external face of continents," says Humboldt, "in the varied and deeply indented outline of their coasts, exercises a beneficial influence on climate, trade and the progress of civilization, so also in the interior, its variations of form in the vertical direction, by mountains, hills and valleys and elevated plains, have consequences no less important. Whatever causes diversity of form or feature on the surface of our planet—mountains, great lakes, grassy steppes, and even deserts surrounded by a coast-line margin of forest—impresses some peculiar mark or character on the social state of its inhabitants."

Our lofty mountain chains and majestic water courses have served, according to the same great philosopher, to furnish a more beautiful and rich variety of individual forms, and to rescue the face of the continent from that dreary uniformity which tends so much to impoverish both the physical and intellectual powers of man.

Had the Missouri river, after taking its rise under the Rocky mountains and uniting with the Mississippi, held its course eastward until their waters were emptied in Long Island Sound, how different would have been the present condition of these United States; had the drainage of the country been in this direction, the Gulf of Mexico would have been as a stagnant pool, and we should have been as indifferent to New Orleans and the purchase of Louisiana, as we now are to Merida and Yucatan. Because the Mississippi river runs from the north to south, it is one among the strongest of the bonds which hold this union of States together.

All the great rivers of the United States lie wholly within the temperate zone. Their basins are spread out under climates which call for the highest energies of man. Dwelling in such regions, he is constrained to be diligent; to labor; to be prudent; to gather into barns; to study the great book of nature; to observe her laws; and whilst it is summer to take thought for winter.

The perpetual summer of the tropics presents no such alternatives. On the same tree may be seen the bud, the flower and the ripe fruit. Here, therefore, nature urges no such necessities, imposes no such tasks, and savage man is as careless of the morrow as are the lilies of the field. The people of the two climates are therefore different. Frequent intercourse between them will improve the character of each, and the most ready channels for such communication are afforded by the rivers that run north or south. With the exception of the Nile, the general direction of all the rivers of Africa is east or west, and not one of their valleys, except the valley of the Nile, has ever been the abode of civilized man.

Civilized society cannot be stationary. Vacuity is not more abhorrent to nature, than is a state of rest, either in the moral or the physical world. The materials of the latter she has divided into ponderables and imponderables, and invested them with antagonistic principles. By the action of light, heat and electricity upon ponderable matter, "the morning stars were first made to sing together," the earth is clothed with verdure, the waves lift up their voices, and the round world is made to rejoice.

She has divided the former into animal and spiritual, and they are antagonistics; the one elevating, the other depressing man in the scale of

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it down, therefore, and this country is placed midway between
pe and Asia; this sea becomes the center of the world and the fo-
of the world's commerce. This is a highway that will give vent to
mmerce, scope to energy, and range to enterprise, which, in a few
years hence, will make gay with steam and canvas, parts of the ocean that are now unfrequented and almost unknown. Old channels of trade will be broken up and new ones opened. We desire to see our own country the standard-bearer in this great work.

ART. VI.—THE RAILWAY SYSTEM OF GREAT BRITAIN.

TRAFFIC OF BRITISH RAILWAYS; COST OF CONSTRUCTION AS COMPARED WITH OTHER NATIONS; RAILROADS ON THE CONTINENT OF EUROPE; RAILROAD TAXATION; SPEED; ACCIDENTS.

Our readers will now be anxious to know the nature and extent of the traffic possessed by these railways, and the pecuniary returns which it has yielded.*

Years.	No. of Passengers.	Rec'pts from Passengers.
1843	23,466,896	£3,110,257
1844	27,763,602	3,439,294
1845	33,791,253	3,976,341
1846	43,796,983	4,725,216
1847	51,352,163	5,149,002
1848	57,965,070	5,720,382

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* From the North British Review for August, 1849.

being. When his course ceases to be upward and onward, the spirit yields to the animal, virtue gives way to vice, the force of evil prevails, and the course of men in their social state is no longer onward and upward, but backward and downward. The sphere that lags behind in its course is hurled from its orbit. History bears witness to the fact, that when nations cease to rise, they begin to fall. The laws of nature are her agents; they cannot act and be still; action implies motion; nature herself is all life and motion—she knows no rest, brooks no pause, either for her moral or her physical agents. Wise men say that she has attached a curse to standing still. This is German philosophy; but the idea is beautiful because it is true. We want the stimulants to energy, the incentives to enterprise, which a highway across the Isthmus is to give, to urge us on to the high destinies that await us. The energies of the country are great; they require some such highway to the Pacific to give them scope and play.

It is for time, and time alone, to decide the question, as to whether the highest degree attainable by man in the social scale, will not first be reached by those people who, with the blessings of free institutions, live on rivers that run north or south through the temperate zone.

On account of this central sea and its system of winds and currents; on account of the course of the rivers which run into it, and of the direction of mountain ranges that traverse the continent; and on account of the character and extent of the river basins, and other geographical features with us, the old world affords no parallel, either in history or example, by which to judge of the destinies of this country. Our mountain ranges are longer, our rivers are more majestic, our valleys are broader, our climates are more varied, our productions are more diversified here, than they are there.

The wheat harvest on the Lower Mississippi commences in June, and in the upper country Christmas is at hand before the corn crop is all gathered in. Thus we have, in the valley of this majestic water-course, a continued succession of harvests during more than half the year. In the other hemisphere the seasons are reversed, and on the banks of the southern tributaries to our central sea, reapers are in the field during the remainder of the year. A sea which is the natural outlet to market of the fruits of regions where seasons are reversed, and the harvest is perennial, is no where else to be found.

Such advantages, both moral and physical, such means of power, wealth and greatness, as have been vouchsafed to us, no nation has ever been permitted to enjoy. We have already more works of internal improvement, a greater length of railroad and canal, built and building, and of river courses open to navigation, more of the buds and blossoms of true greatness, than all the world besides.

In these facts we see the effect of geographical features, as well as of free institutions.

As a general rule, our railroads and rivers are at right-angles in their courses. In the New England States, where the rivers run south, the railroads run east and west; in the Middle and Southern States, where the water-courses run eastwardly, the railroads take a more northwardly direction. Rivers run from the mountains to the sea. Railroads run across the mountains; they go from valley to valley.

In calculating the sources of national wealth, prosperity and greatness which are contained, for this country, in river basins, central seas, mountain ranges, water-courses and geographical features, the lights of history are of no avail. The canvas is prepared and the easel ready, but colors that are bright enough for the picture cannot be found. The exceeding great resources of our Mediterranean beggar description.

We know that other places, with the elements of commerce in far more scanty proportions, with facilities less abundant and obstacles far greater, have grown opulent and obtained renown in the world: while one calls to mind the history of such places, he feels that here is room and scope enough for individual wealth far more dazzling, for national greatness far more imposing, and a renown far more glorious.

From all this, we are led to the conclusion that the time is rapidly approaching, if it has not already arrived, when the Atlantic and Pacific *must* join hands across the Isthmus. We have shown that there is no sea in the world which is possessed of such importance as this southern sea of ours; that with its succession of harvests there is, from some one or other of its river basins, a crop always on the way to market; that it has for back country a continent at the north and another at the south, and a world both to the east and the west; we have shown how it is contiguous to the two first, and convenient to them all. The three great outlets of commerce, the Delta of the Mississippi, the mouths of the Hudson and the Amazon, are all within two thousand miles, ten day's sail, of Darien. It is a barrier that separates us from the markets of six hundred millions of people—three-fourths of the population of the earth. Break it down, therefore, and this country is placed midway between Europe and Asia; this sea becomes the center of the world and the focus of the world's commerce. This is a highway that will give vent to commerce, scope to energy, and range to enterprise, which, in a few years hence, will make gay with steam and canvas, parts of the ocean that are now unfrequented and almost unknown. Old channels of trade will be broken up and new ones opened. We desire to see our own country the standard-bearer in this great work.

ART. VI.—THE RAILWAY SYSTEM OF GREAT BRITAIN.

TRAFFIC OF BRITISH RAILWAYS; COST OF CONSTRUCTION AS COMPARED WITH OTHER NATIONS; RAILROADS ON THE CONTINENT OF EUROPE; RAILROAD TAXATION; SPEED; ACCIDENTS.

Our readers will now be anxious to know the nature and extent of the traffic possessed by these railways, and the pecuniary returns which it has yielded.*

Years.	No. of Passengers.	Rec'pts from Passengers.
1843,	23,466,896	£3,110,257
1844,	27,763,602	3,439,294
1845,	33,791,253	3,976,341
1846,	48,796,983	4,725,216
1847,	51,352,163	5,149,002
1848,	57,965,070	5,720,382

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* From the North British Review for August, 1849.

It appears from this table, that though the number of miles of railway opened in 1848 was more than double of that opened in 1843, and though the number of passengers had increased in a still greater proportion, yet the receipts were not nearly double, being only as 57 to 31, a result which must have arisen either from the passengers having traveled a shorter distance, or from their having traveled in carriages of a lower class—results arising, doubtless, from the state of the country.

In the table of the goods traffic the result is widely different:

Years.	Receipts from Goods.	Total receipts from Goods and Passengers.
1843,	£1,424,932	£4,535,189
1844,	1,635,380	5,074,674
1845,	2,233,373	6,208,719
1846,	2,846,353	7,565,569
1847,	7,362,884	8,510,886
1848,	4,213,169	9,933,551

This table is a most important one, as it proves that while the railway lines have been little more than doubled, or have been increased in the ratio of 18.6 to 38.7, the receipts from goods have been increased *three times*, in the ratio of 14 to 42; so that the total receipts have increased at a greater ratio than the number of miles, viz., as 45 to 99.

In order to learn what classes of society contribute to the support of the railway system, and in what proportion, we shall take the year from 30th June, 1847, to 30th June, 1848, the number of miles that were open at the beginning of this period being 3,507, and the number open at the end of it, 4,357:

	Passengers.	Receipts.
First class,	7,190,779	£1,792,533
Second class,	21,690,509	2,353,153
Third class,	15,241,529	661,038
Parliamentary class,	13,092,489	902,851
Mixed,	749,763	11,807
Total,	57,965,069	£5,721,382
Receipts, from goods, cattle, parcels, &c.		4,213,179
Total receipts for the years 1847, 1848,		£9,934,561

It appears from this table that the middle classes of society are the best contributors to railways. The number of that class who travel in second class carriages being *three* times greater than those who travel in first class carriages, and the receipts from that class being greater in the ratio of 18 to 24.

The same returns for the half year ending December 31st, 1848, give a very favorable view of the progress of the system. The number of miles open at the beginning of that half year was 4,443, and the number open at the end of it, 5,079. These 5,079 are distributed as follows:

Railways in England,	3918
" in Scotland,	728
" in Ireland,	261

	Passengers.	Receipts.
First class,	3,743,602	£1,003,516
Second class,	12,191,549	1,360,468
Third class,	7,184,032	320,862

Parliamentary class,	8,450,623	597,071
Mixed,	60,485	1,382
Total,	31,630,291	£3,283,299
Receipts from goods, cattle, parcels, &c.,		2,461,662
Total receipts for half year ending Dec. 31st, 1848,		£5,744,961

It is obvious from this table, compared with the preceding, that the second class passengers have increased in a greater ratio than the others.

Taking the average number of miles open, during the half year, at 4,756, the receipts for each mile would average £1,208. On the following principal lines this average differs greatly:

On the London and North-western, it is	£2625
" Edinburgh and Glasgow, "	1853
" Great Western, "	1795
" Lancashire and Yorkshire, "	1681
" South-eastern, "	1675
" London, Brighton and South Coast, it is	1657
" Midland, "	1385
" South-western, "	1341
" Eastern counties, "	1298
" York, Newcastle and Berwick, "	1170
" Caledonian, "	837
" York and North Midland, "	723
" Eastern Union, "	700
" Great Southern and Western of Ireland, it is	592

In their latest report the railway commissioners have endeavored to estimate the amount of money expended on the construction of railways:

> "The returns, which will enable them to do this accurately, are being received by them, and will, on their completion, be laid before Parliament. They believe, however, that the expenditure in 1848 was less than that in 1847, but nearly as large as the expenditure in 1846; that at the end of 1848, rather more than £200,000,000 had been expended on railways; that the companies retained power to expend upon authorized railways £140,000,000, and that the extension of time which has been granted to so many companies, will allow this expenditure to be distributed over five or six years. But it has already been stated, that it appears probable that a large proportion of the lines not now in progress, will never be completed; and if it be assumed that at least one-half of the lines which are not in progress will be entirely abandoned, it may also be assumed that £50,000,000 of authorized capital will not be required."—*Report for* 1848, *Part ii, p.* 7.

Before concluding our general notice of the physical and commercial character of our railway system, we must notice the comparative expenses which have been incurred in England and in foreign countries. In favorable situations, English railways, with their double lines of rails, have been constructed for £10,000 per mile. When the localities have been very unfavorable, they have cost as much as £50,000 per mile. Between these two expenses we have all varieties of expenditure per mile. Mr. Lecount has computed that a railway eighty miles long, which cost £960,000, or £12,000 per mile, which will rarely happen, would require the following traffic per day, from each end, to pay the annexed dividends:

Tons of goods per day.		Passengers per day.	Dividend.
75	or	120	¼ per cent.
100	or	160	1 "
125	or	200	1¾ "
200	or	320	4½ "

Or, taking into account a traffic composed of both passengers and goods, the calculation would stand thus:

Tons of goods per day.		Passengers per day.	Dividend.
35	and	60	¾ per cent.
50	and	80	1 "
62	and	100	1¾ "
100	and	160	4½ "

It seldom happens that, in this country, a mile of railway can be executed at so low a rate as £12,000 per mile.

The average expense of £5,081 per mile for American roads, employed by Mr. Lecount, agrees very nearly with the following statement mentioned by Mr. French, the member for Roscommon county, in the discussion on Irish railways, in the House of Commons, on the 9th of July:

	Per mile.
Columbia and Philadelphia,	£10,000
Boston and Worcester,	7,700
Western,	7,300
Camden and Amboy,	4,100
Utica,	3,600
Richmond,	3,600
Florida,	3,200
Auburn,	2,900
South Carolina,	2,600
Average,	£5,000

In Prussia, a comprehensive system of railways, to the extent of 3,200 miles, was planned by the Government, with its usual wisdom and liberality; but, up to 1845, six hundred and fifty-two miles only were completed, as shown in the following table—the political disturbances in 1848 and 1849 having doubtless prevented the execution of the general plan:

	Length of Line in Miles.	Cost.
Berlin and Anhalt,	93½	£726,873
Berlin and Potsdam,	16	210,000
Berlin and Stettin,	83	783,000
Berlin and Frankfort on Oder,	49½	420,000
Lower Silesian, }	134	1,200,000
Upper Silesian,* }	49½	630,000
Breslau and Schweidnitz,	37	285,000
Magdeburg and Leipsic,	67½	615,000
Magdeburg and Halberstadt,	35½	286,155
Dusseldorf and Elberfeld,	16	304,170
Cologne and Aix-la-Chapelle,	52	1,425,000
Cologne and Bonn,	18½	131,000
Total,	652	£7,017,198

According to this table, the average cost of the Prussian lines is about £10,000 per mile.

The following table shows the length and cost of each of the lines formed in Austria:

	Length in Miles.	Cost.
Linz Gmunden Budweis.	119	£ 742,000
Emperor Ferdinand's line,	179	1,700,000

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[*] The Government have guaranteed 3½ per cent. to the companies.

Vienna to Glognitz,	46	1,050,000
Olmutz and Prague,	151	1,853,725
Murzuschlag and Gratz,	57½	not given.
Total,	495	£4,936,325

These lines show an average of about £11,300 per mile.

The small states of Germany have executed the following lines of railway, 541 miles in length, of which 371 miles belong to the Government:

	Length in Miles.	Cost.
*Baden,†	97	£1,704,036
*Brunswick and Hanover,	38	209,707
*Brunswick and Oscherleben,	43	240,000
*Brunswick and Harzburg,	27½	127,500
Hamburg to Bergstorf,	10½	191,332
Altona to Kiel,	64	382,500
Leipsic to Dresden,	71½	975,000
*Saxon Bavarian,	51	900,000
Taunus Railway,	28	291,661
*Munich to Augsburg,	37½	350,000
*Louis, Southern and Northern,	70	4,286,500
Nuremburg and Furth,	4	17,708
Total,	541	£9,676,249

The average cost of these lines will be about £19,000 per mile.

After these details regarding foreign railways, our readers will scarcely give credit to the following statement regarding the expense *per mile* of English railways:

	Per Mile.
Blackwall Railway,	£289,980
Croydon,	80,400
Manchester and Bury,	70,000
Manchester and Leeds,	64,588
Manchester and Birmingham,	61,624
Brighton,	56,981
Manchester and Sheffield,	56,316
Eastern Counties,	46,355
Great Western,	46,870
South-eastern,	44,412
North-western,	41,612

Leaving out the Blackwall railway, which would make an average of the expense of the preceding lines ridiculous, the average expense of the remaining ones per mile is £56,915! Some idea of the cause of apparently such profligate expenditure may be formed from the following facts:

			Per Mile.
Parliamentary	expenses of the	Blackwall railway,	£14,414
"	"	Eastern Counties,	886
"	"	Manchester and Birmingham,	5,190
"	"	Brighton,	4,806

The following sums, per mile, were paid for land:

	Per Mile.
Manchester and Birmingham,	£16,262
Eastern Counties,	15,881
Brighton,	10,105
Average per mile,	14,083

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† The lines marked *, were executed at the expense of the Government.

So little is known in this country concerning foreign railways, that we were anxious to have supplied the defect by copious details respecting their history and statistics, and by comparing them with our own, in reference to the cost of their construction and maintenance, the accommodation of passengers, and their receipts and prospects: but though we have collected much information on the subject, our restricted space will not allow us to give it in detail. We shall therefore content ourselves with such an abstract of the more important particulars as our limits will permit. The following table contains a general view of the railway system in Germany:

Names of the States.	English miles constructed.	Eng. miles in project.	Eng. miles to be constructed.	Eng. miles total.
Austria,	716½	229	158½	1103
Prussia,	677½	403	794	1874
Duchy of Anhalt,	39½	12½	—	52
Kingdom of Saxony,	176	148	7	331
Duchy of Saxe,	137½	43½	87	144
Bavaria,	149	308½	174½	632
Wurtemberg,	24	148	32	204
Grand Duchy of Baden,	154½	35½	—	195
" Hesse Darmstadt,	34½	43½	40	118
Duchy of Nassau,	27	—	—	27
Francfort-on-Main,	2	14	—	16
Electorate of Hesse,	"	178	4	182
Duchy of Brunswick,	73	—	7	80
Hanover,	59	154	161	374
Hanseatic Towns,	9	—	2⅓	11⅓
Grand Duchy of Mecklenburg,	46	—	94⅓	140⅓
Holstein and Lauenberg,	96	31	43½	170½
Total,	2294	1748½	1595⅙	5637⅙

The total number of miles thus projected in all Germany, is not much greater than the number now executed in England.

We have now before us a very interesting table of French railways in 1847, with the minutest details, occupying thirteen separate columns, and showing the expense of all the different varieties of work necessary for their completion. We must confine ourselves, however, to a brief abstract:*

Names of the Lines.		Length in kilometers actually constructed.	Total expense.	Expense per Eng. mile.
†St. Etienne to Anvrezieux,		21.25	f. 2,996,503	f. 144,296
do. to Lyons,		56.69	21,182,873	373,648
Branch to Montand,		"	399,549	"
†Anvrezieux to Roanne,		67.00	12,500,000	186,587
†The Garde Line, Nismes, &c.,		92.32	18,914,368	204,876
Paris to St. Germains,		18.47	16,413,139	888,830
Atmospherical Branch,		2.00	4,689,835	"
†Anzin to Denain and Abscon,		15.56	2,818,202	181,083
†Montpellier to Cette,		27.35	4,509,134	164,885
Paris to Versailles,		19.50	17,055,722	874,652
Do. to do.		16.89	16,855,301	998,005
†Bordeaux to La Teste,		52.31	5,987,773	114,471
†Alsace,	Mulhouts to	15.00	2,869,096	191,273
	Strasburg to Basle,	140.50	44,953,618	319,953
Paris	Orleans, Corbeil,	132.69	59,652,779	449,531

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* The lines marked † are only single lines.

Paris to Rouen,	131.31	64,589,384	494,169
Rouen to Havre,	91.00	56,560,316	621,542
Montpellier to Nismes,	52.00	16,519,605	317,685
†Paris to Sceaux,	10.45	4,740,120	453,754
The Northern Line,	334.90	135,476,337	404,528

The following lines have been opened in France between 1847 and August, 1849:

	Kilom.		Kilom.
Paris to Tronnerre,	185	Amiens to Boulogne,	124
Paris to Troyes,	182	Marseilles to Avignon,	123
Orleans to Saumur,	171	Rouen to Dieppe,	70
Orleans to Bourges,	112	Vierzon to Chateauroux,	63

Making about 1,360 English miles in all France.

The lines in Belgium, constructed by the State, amount to 347 miles, and cost £5,945,148. They unite Brussels with Ostend, Bruges, Ghent, Antwerp, Malines, Courtray, Lille, Tournay, Douay, Valenciennes, Mons, Charleroi, Namur, Marienboug, Liége and Aix-la-Chapelle.

In Holland there are railways joining Amsterdam with Rotterdam, fifty miles; and with Utrecht and Arnheim, sixty miles.

In the north of Italy a line partly finished passes from Venice to Turin and Alessandria, by Vicenza, Verona, Brescia, Milan and Novara, and one from Milan to Monza. There is also a line from Florence to Leghorn, through Pisa, and to Pontedera; another from Pisa to Lucca and St. Salvatore, and another from Florence to Prato.

In the south of Italy there is a railway from Naples to Pompeii and Castellamare, and another from Naples to Caserta and Capua; but no line has been projected in the States of the Church. The Pope, indeed, is said to have objected to their introduction.

There is a railway in Switzerland, twenty-five English miles in length, from Zurich to Dietiken and Baden; and, even in Spain, a railway seventeen and three-quarter English miles in length has been recently opened from Barcelona to Mataro.

The most eastern railways in Europe terminate at Warsaw and Cracow. A line is in progress to Bochnia, east of Cracow, and another from Pesth to Debretzin, still further east.

The Swedish government have exhibited great practical wisdom in the encouragement they have given in the formation of railways. The State guarantees to the projectors four per cent. for fifteen years; and the pecuniary loans given by Government are not to be repaid till after ten years, and then they are only to be exacted from one-half of the surplus profits above six per cent. If the State resolves to purchase the lines, they cannot do so till after twenty years, and they must then pay a bonus of twenty-five per cent. In place of a tax being exacted by the State, as in British railways, and exorbitant local rates, the Government gives, for nothing, the portions of the crown-lands through which the lines may pass, and also the labor of soldiers, paupers and convicts, at reduced wages. The Government has also agreed to erect electric telegraphs at their own expense.

The liberal conduct of the Swedish and other Governments to railway enterprise, forms a singular contrast with that of Great Britain. When the early railway companies were receiving large dividends, it was not to be wondered at that Government, in its necessities, should impose some tax upon their exorbitant profits, and that the parochial authorities should imitate their example. In the present state of railway property, however, these burdens are intolerable, and cannot, with any propriety, be much longer imposed. The London and North-Western Company have paid, during the last year, the sum of £50,505 for government duty, and £58,650 for local rates and taxes. In the half year just ended, the London and South-Western Company have paid for local rates alone, £10,833, which is *upward of eleven per cent. on their balance available for a dividend!* This tax, consisting chiefly of poor's rate, is so unjust and oppressive that Parliament ought instantly to redress the grievance. In this last case, every adult employed by the Company is taxed £12 10s. per annum, while the average impost on the male population of the country is only 30s. per head.

The following table shows the taxes imposed upon railways for the year 1848:

	Government Duty.			Rates and Taxes.		
London and North-western,.............	£50,505	8	0	£58,649	15	10
Great Western,.........................	29,603	18	8	38,555	5	2
Midland,...............................	23,043	10	5	33,125	13	2
Eastern Counties,......................	16,817	5	1	24,754	3	8
London, Brighton and South Coast,.......	16,376	5	0	22,834	3	5
London and South-western,.............	15,033	5	0	19,491	9	6
South-eastern,.........................	14,895	9	1	24,367	18	10
York and North Midland,...............	7,092	14	1	13,960	18	2
York, Newcastle and Berwick,...........	6,571	9	3	14,513	17	1
Lancashire and Yorkshire,...............	4,336	10	4	16,793	10	2
London and Blackwall,.................	2,363	11	6	2,209	13	7
South Devon,...........................	2,134	6	5	2,017	1	10
East Lancashire,.......................	1,906	18	1	2,695	14	1
Birkenhead, Lancashire and Cheshire......	1,602	15	3	457	12	10
Manchester, Sheffield and Lincolnshire, ...	1,172	19	3	3,423	0	5

Railways have not made much progress in our colonies and dependencies. They have been checked by the same causes which operated in every part of Europe. The East India Company have guaranteed to the Great Indian Peninsular Company a dividend of five per cent. upon £500,000, a sum which is supposed capable of completing the first thirty-five miles of the line, from Bombay to Callian; and the 11th and 12th Victoria, cap. 13, guarantees four per cent. for loans for the construction of railways in the West Indies and Mauritius. A number of railway acts, passed by the legislatures of the colonies of British Guiana, Trinidad, Jamaica, Ceylon, New Brunswick and Canada, have been reported upon by the railway commissioners to the Colonial Office. Colonial acts have also been passed, in 1847 and 1848, for incorporating the Nova Scotia Electrical Telegraph Company, and the British North American Electro-Magnetic Telegraph Association.

The greatest RAILWAY SPEED that has yet been accomplished, was displayed by the *Courier*, in traveling from Didcot to Paddington, on the 26th August, 1848, with the twelve o'clock express train from Exeter. This engine is one of the eight-wheel class, with eight feet driving wheels, a cylinder of eighteen inches, and a stroke of twenty-four feet. From a state of rest at Didcot to the time when the train entered the station at Paddington, only forty-nine minutes and thirteen seconds elapsed; that is at the average rate of *sixty-seven miles* an hour, including the time lost in getting up speed when leaving Didcot, and in reducing speed when approaching Paddington. Exclusive, however, of these losses, exactly, in traveling from the forty-seventh mile-post, which the train passed at 3h 46′ 40½″ to the fourth mile-post, which it reached at 4h 23′ 26½″, *forty-three miles were performed in thirty-six minutes and forty seconds*, or an average speed accomplished of *upward of seventy miles per hour*. While the train is thus almost on the wing, beating the eagle in its flight, the passengers are reclining in their easy chairs, thinking or sleeping, reading or writing, as if they were in their own happy homes—safer, indeed, than there, for thieves cannot rob them by day, nor burglars alarm them by night. The steam-horse starts neither at the roar of the thunderstorm nor the flash of its fire. Draughts of a purer air expel the marsh poison from its seat before it has begun its work of death; and, surrounded by conductors, the delicate and timid traveler looks without dismay on the forked messengers of destruction, twisting the spire, or rending the oak, or raging above the fear-stricken dwellings of man.

In a former article we had occasion to mention the *increasing* safety of steam navigation, as exhibited in the voyages of steamers connected with the State of New York. In the five years ending with 1824, *one* life was lost out of every 126,211 passengers; in the same period, ending with 1833, *one* life was lost in every 151,931 passengers; and in the same period, ending with 1338, only *one* life was lost out of 1,985,-787, the safety of the passengers having increased sixteen and one-half times. The same result has been obtained in railway traveling. According to the calculations of Baron von Reden, the following were the casualties which took place on the railways of England, France, Belgium and Germany, between the 1st of August, 1840, and July, 1845:

England,	1	passenger	out of	869,000	passengers,	killed by	his own	negligence.
France,	1	do.	do.	2,157,000	do.	do.	do.	do.
Belgium,	1	do.	do.	670,000	do.	do.	do.	do.
Germany,	1	do.	do.	25,000,000	do.	do.	do.	do.
England,	1	official	out of	300,000	officials,	killed	and wounded	from misconduct.
France,	1	do.	do.	5,000,000	do.	do.	do.	do.
Belgium,	1	do.	do.	280,000	do.	do.	do.	do.
Germany,	1	do.	do.	9,000,000	do.	do.	do.	do.
[illegible]land,	1	person	out of	852,000	killed	from	defective management.	
[illegible]ce,	1	do.	do.	3,465,996	do.	do.	do.	
Belgium,	1	do.	do.	1,690,764	do.	do.	do.	
Germany,	1	do.	do.	12,254,858	do.	do.	do.	

The safety of railway traveling in Germany, as shown in the above table, is very remarkable, and to us inexplicable; nor is the great loss of life on English railways less unaccountable; for it is four and one-quarter times greater than in France, two times greater than in Belgium, for passengers, and nearly fifteen times greater than in Germany. If these results are correct, they inspire us at least with the hope that all nations may now rival the Germans in the safety with which they conduct their railway operations. That railway traveling in England is approaching rapidly to that in Germany, in respect to the safety of travelers, we shall be able to show from documents that cannot be questioned. We have now before us the returns to Parliament of all the accidents which have taken place on the railways of Great Britain and Ireland for the years 1847 and 1848, and from them we obtain the following important results:

In 1847.

19 passengers killed, and	87 injured, from causes beyond their control.
8 do. do.	3 injured, owing to their own misconduct or incaution.
17 servants killed.	25 servants injured from causes beyond their control.
107 do. do.	43 injured, owing to want of caution.
55 trespassers killed.	12 injured.
1 person killed.	1 injured by crossing or standing on the line.
1 suicide.	
211 killed.	174 injured.

The number of passengers during 1847 was 54,854,019.

In 1848.

9 passengers killed and	128 injured, from causes beyond their own control.
12 do. do.	7 injured, owing to their own misconduct or incaution.
13 servants killed.	32 injured from causes beyond their own control.
125 do. do.	42 injured from misconduct or incaution.
41 trespassers killed.	10 injured from crossing or standing on line.
202 killed.	219 injured.

The number of passengers during 1848 was 57,855,133.

If we now take the number of passengers killed from causes beyond their own control, we shall obtain the following results:

	Passengers killed.	
1847,....................	19	or 1 out of 2,887,053 passengers.
1848,....................	9	or 1 out of 6,428,348 passengers.

Hence the risk of being killed was nearly two and one-half times less in 1848 than in 1847, and nearly eight times less than it was in the years 1846 and 1845, according to Baron von Reden's calculations. The comparatively great loss of life to passengers in 1847, was occasioned by the accident at Wolverton, on the 5th of November, when *seven* passengers were killed by the passenger trains running into a sliding, and coming into collision with a coal train, in consequence of the negligence of the policeman; and also to the death of three passengers on the 24th of May, by the fall of part of the railway bridge over the river Dee, when part of the train was precipitated into the water. Such disasters will, in all probability, never again occur. They have, at least, not occurred in 1848 and 1849; and we can therefore say to our timid and over-sensitive friends, who refuse to travel on railways, that in the year 1848 only one passenger was killed out of *six and a half millions* of passengers who traveled by railway; and that no safer traveling than this is to be found, or can be conceived.

INTERNAL IMPROVEMENTS.

1. RAILROAD BETWEEN NEW ORLEANS AND JACKSON, MISSISSIPPI.

A LARGE and respectable mass meeting has lately been held at Jackson, Mississippi, to urge the importance of an immediate construction of such a railroad. A convention of the States of Louisiana and Mississippi is called to decide upon the matter. The convention will be held at Monticello, Mississippi, on the *second Monday in December*. We extract the following from a speech delivered by Col. Tarpley, who has, for some time, been advocating the road, in an able series of letters published in the "*Mississippian:*"

"Col. T. went on to show the advantages that would arise to the people of middle Mississippi from the construction of the proposed road; and taking the business of the Vicksburg road as the basis, he demonstrated that there would be a clear saving of near $300,000 a year, to the farmers of the country, in the shipment of their cotton and in the expenses of the imports of the country, by the construction of the road. He next spoke of the advantages that the country would derive from the road, in the increased value of the lands, and the change in the mode of agriculture; making this a *farming* rather than a *planting* country; thereby increasing the morality and wealth of the country, as well as ameliorating the condition of the slaves, and producing more equality by a more equal distribution of property, arising from this outlet for all the surplus productions of the orchard, the garden, the dairy, and the poultry yard. He also contended that its benefits would be almost incalculable to the piney woods counties upon the line of the road and would develop the resources of one of the finest and most productive regions of the whole State, that is now comparatively useless, for want of a convenient market. That the turpentine business, that had been worth to North Carolina about $8,000,000 annually, could be made equally valuable to Mississippi; that lumber, tar, pitch, cord wood, coal, beef cattle, wool, mutton, beeswax, tallow, hides, and a thousand other products besides, would enrich the state to an amount equally great every year; and that the whole region, from Jackson to New Orleans, would be speedily settled with an industrious and thrifty population; that the wilderness would soon blossom as the garden, and constitute the most desirable dwelling place of any other portion of the State. The speaker then exhibited the advantages that this road would be to the city of New Orleans, and the way in which it would increase her commerce, and showed very conclusively, that if the road should not be constructed. a large portion of her present commerce would be drained off by way of the Mobile Railroad, now being constructed from that point through eastern Mississippi and western Tennessee, to the mouth of the Ohio river.

"Col. T. then went into a calculation of the cost of the road, and the means by which it could be constructed—also, the business that would be done upon the road; and demonstrated, beyond all doubt, that the stock would pay at least twelve and a half per cent. on the investment, the first year, and increase more than a hundred per cent. in ten years."

2. GEORGIA RAILROAD ENTERPRISE.

We take the following from the Savannah Republican:

"The enterprise of the people of Georgia, unostentatiously displayed in constructing the splendid lines of railway now in operation, has astonished our brethern of the northern and south-western portions of the Union. In railroad reports, in the public journals, in the letters of intelligent travelers, everywhere do we find the high estimation in which our State is held. We would not boast at this state of things; rather would we seek to show what yet is wanting to perfect the system of internal communication, so that the people of every quarter of our domain could have the same advantages which the railways now in use afford.

"We propose, in a few brief articles, to give a succinct account of the roads now in operation—how built, and at what cost—to show what lines are projected and being constructed, and what will probably be their influence—and then to exhibit a plan by which the State can, at a very trifling expense, complete a system of so general benefit, that, for a generation yet to come, no further outlay of capital will be necessary.

"The Macon and Western Railroad, the phœnix of the *old Monroe road*, first claims our notice. The Monroe road was projected to run from Macon to Forsyth, and afterward the project was extended to Atlanta, Georgia. It was a bold movement in its inception, but hazardous in the extreme; for, when its authors started, there was no prospect of a road below Macon or above Forsyth. When it was determined to build the Western and Atlantic and Central roads, the Monroe company was to form the connecting link between them, and thus was a way looked for from the Tennessee river to the city of Savannah. After many struggles, and the establishment of the present flourishing town of Griffin, the company failed—its affairs went into chancery. and the road was sold. It is now in new hands—has been completed and in operation for near three years, and is doing a splendid business. A million of dollars was lost to the people by the old company; but the new company has finished a road, worth over a million of dollars, on an outlay of not much over half a million. We shall consider the cost of the road, one hundred and one miles in length, at $1,500,000.

"The Georgia Railroad, from Augusta to Atlanta, one hundred and seventy-one miles, was finished about three years ago. It has a branch, of forty miles in length, to Athens. It has cost, in round numbers, with all its equipments, $3,500,000.

"The Central road, from Savannah to Macon, one hundred and ninety-one and a quarter miles, was finished five years ago. Its cost, from first to last, with its equipments, may be placed at $3,000,000.

"The Memphis Branch Railroad, seventeen miles long, from Kingston, on the Western and Atlantic Railroad, to Rome, at the head of the Coosa river, has been finished within the last year. We do not know its cost, but it may be fairly put down at $130,000.

"These four roads, together five hundred and twenty miles in length, were built *entirely by individual and city corporation subscriptions*. Not a dollar was ever advanced, to either of the corporations, by the State.

"The Western and Atlantic road, one hundred and forty miles in length, from Atlanta to Chattanooga, on the Tennessee river, in the State of Tennessee, was opened to Dalton, one hundred miles, about two years ago, and will be opened to Chattanooga on or about the first day of November next. Then will Georgia have a line of railroad from Savannah to the Tennessee river, of four hundred and thirty-two miles—and a line from Augusta to Atlanta of one hundred and seventy-one miles, besides the branches to Athens and Rome. These lines will, in a brief period, be extended through the Nashville and Chattanooga road to Nashville.

"The Western and Atlantic road has been built by the State out of the public treasury. All the citizens of the State, therefore, have contributed in equal proportions to the erection of this great road—an everlasting monument of the wisdom and liberality of the State Legislature. Its cost, with equipments, when completed, may be placed at the sum of $4,000,000.

"Thus have six hundred and sixty miles of rail-road been constructed and equipped within the last fifteen years at a cost of about $12,000,000, *two-thirds* of which amount have been furnished by individual enterprise and exertion, and one-third by the State.

"Of the skill and perseverance displayed in these truly great works, or of the effects of the roads on the prosperity of the people, we need not say a word. *The roads shall speak for themselves.*"

3. PLANK ROADS.—No. 2.

I will add to the list of plank roads one more, which is a competitor with other, and as we are in the habit of thinking, more perfect improvements, viz: the Oswego and Syracuse Plank Road. A branch of the Erie Canal connects these points, and, unless I much mistake, there is a railroad between the same points. Still, with all these facilities, the Editor of the Oswego Commercial Times remarks: "Oswego begins to experience the benefits of plank roads, and to appreciate their importance to all classes and branches of business." And, in another place, he adds: "Plank roads are no longer an experiment here. The certainty of ample returns to the investment of capital, and the great advantages secured to the trading and agricultural interests, have been demonstrated and established."

I do not anticipate that plank roads are ever, with us, to become rivals to our railroads for the public favor; but, on the contrary, that the two systems will be found to work harmoniously together; and that the former will become important feeders to the latter, I have little doubt.

Under the general Plank Road Law of the State of New York, on the application to the supervisors of any number of persons, not less than five, for permission to build a plank road, and if, after examining the pros and cons at a meeting, of which public notice is given, it appears called for by the public convenience, a permit is given, whereupon the company proceed to construct their road, and erect toll gates. This permit, or grant, may be for an entire new route, the company paying the damage occasioned by running their road through private property, in the same manner, and the amount of damage determined mostly in the same way as in the case of railroads; or for a road to be laid down along a common highway previously existing—the company paying to the different townships the just value of the common roads so taken—which amount is appropriated by law to the repair and improvement of other roads.

There are numerous instances in the State of New York of both descriptions, that is, on new and independent routes, and of routes following the common roads, with all the sinuosities common to them. In this case, all that is necessary preparatory to laying down the plank is, occasionally to cut off the crest of a hill or to raise a hollow, to bring the inclination within any maximum which the company may adopt—the law being silent on this head, though defining the form, &c., of the road in many other particulars.

My own impression is, that it will be found advisable here to construct plank roads on new and independent routes, as along the common, or country roads, as they are here called, in a great many instances, if not for a great proportion of their length, the surface soil has been entirely removed or washed off by the rains; leaving in wet weather a soft yielding surface, highly unfavorable as the bed of a plank road, which obstinately opposing the filtration of the water or any other means of escape, the effect of passing loads will be to convert this into a half liquid mass, until what is technically known as *churning* will be the result. Not that this could not be guarded against and prevented by sufficient care and outlay, but with the natural surface soil for a foundation, much less care would be required.

The preliminary steps having been taken as before described, the clearing, grubbing and leveling are commenced. The road is cleared, grubbed and leveled 20 feet in width. Preparation for laying the superstruction is then made, by plowing or picking up (usually the former) the surface, and making it mellow and convenient to be brought into the precise shape required. On one side of the center of the graded track, two channels are then dug, being guided by a line which is stretched where one end of the planks will come. These channels are dug such a distance apart, that the stringers, when laid in them, will be seven feet apart from outside to outside. At the first glance, it might appear preferable to have them nearer together; but it is understood this would involve liability in the planks to tip up when a heavy loaded wagon drives upon the road, having a bearing at first only on the extreme ends of the planks.

The mud-sills or stringers having been properly adjusted in the trenches, the earth, having been previously made mellow, is filled in around and between the stringers, and also for the space of a few inches on the outside of them. This filling is raised about one inch above the stringers, and is now ready to receive the plank, which are uniformly eight feet long, and of any width from ten to fifteen inches, and frequently wider at one end than the other; which, while it effects a saving of timber, is at the same time an advantage from the facility it affords in turning curves, by putting several wide ends or butts together in succession. The thickness of the planks varies on different roads from three to four inches, though the former is much the most common. The stringers are pretty uniformly four inches square, and any convenient length from sixteen to twenty feet, and simply laid end to end without any splicing or fastening. In some instances, planks three inches thick and twelve inches wide have been recommended and adopted, but the four inch stringer is much the most common, and appears to answer the purpose well, as little reliance is placed upon the stringers for the bearing.

Two men place the plank in its place, and a third standing on it, with a heavy wooden maul made of a sound piece of timber two and a half feet long, and eight inches thick, with a pin through one end for a handle, strikes the plank a blow upon its edge, in the middle, to drive it up to its fellow. Then three or four blows are given upon the surface of the plank, at different points, when it becomes firmly and accurately settled down to the stringers, carrying with it the earth which has been filled above the stringers, and on which the plank now mainly depends for its support. One more blow, on the edge of the plank, finishes the operation, by which time another plank is ready, and the process is rapidly repeated. I should remark, however, that each plank is alternately laid in and out, or jutting past each other about three inches, for the purpose of assisting the wheels to raise upon the road in the event of a rut being formed at the ends of the planks. The planks, however, are all cut the same length, and are either delivered upon the ground eight feet long, or sixteen feet. If the latter, they are piled up and sawed in two with a cross-cut saw.

The timber used is uniformly hemlock, which is a cheap, but very imperfect timber. Besides being exceedingly notty, it is soft and extremely porous, absorbing water almost like a sponge; which, under these circumstances, is very prejudicial to its durability. The estimate of its durability in plank roads is, however, several years; which is about all we could expect from good heart pine in this climate.

4. MOBILE AND OHIO RAILROAD.—No. 4*.

THIRD.—*The transportation of Mails.*—This item at $200 per mile, which is about the rate paid for day service, would yield to the road a revenue of $94,000 per annum.

To give, in a tabular form, a view of the probable business and details of the Mobile and Ohio Railroad, deduced from the foregoing data, and adopting the lowest scale of charges for through freight:

PROBABLE BUSINESS OF MOBILE AND OHIO RAILROAD FOR ONE YEAR—LOCAL TRADE.

100 passengers per day, each way, average half distance, 73,000	a $6,		$438.000
300,000 bushels wheat " "	a 10 cents,		30,000
500,000 " corn " "	a 10 cents,		50,000
350,000 bales cotton " "	a $1 50,		525,000
20,000 tons freight, both ways " "	3 00,		60.000
			$1,103,000
THROUGH TRADE.			
25,000 passengers each way, or 68½ per day, 50,000	a $10.	$500.000	
330,000 barrels flour	a 50 cents,	115,000	
86,500 " pork, beef, and whisky	a 60 "	51,900	
3,200 tons bacon	a $5,	16,000	
630,000 sacks corn	a 12½ cents,	78,750	
227,000 kegs lard	a 20 "	45,400	
156,000 pigs lead	a 20 "	31.200	
10,000 tons all other down freight	a $5,	50,000	
30.000 " up freight	a $5,	150,000	
			$1,038,950
Mail transportation			94,000
Total estimated receipts			$2,235,250

EXPENSES.

Transportation 73,000 passengers half distance, and 50,000 whole distance, equals 86,500 carried 470 miles; or 40,655,000 passengers carried one mile; which, at .840 per passenger, the actual cost on Baltimore and Ohio Railroad (exclusive of horse power), is	$341,502 00
Transportation freight, estimated in tons, equals 258,425 tons carried 470 miles, or 121,459,750 tons carried one mile; which, at .663 per ton, is	805,278 14
Total estimated expenses	$1,146,780 14
Total net income	1,088,469 86

Which is equal to 15½ per cent., on a capital of seven millions.

When the great diminution in cost of transportation over level or descending grades and straight lines, in comparison with frequent curves and heavy grades, is considered; and the advantages which the Mobile and Ohio Railroad will possess, in these respects, over any other road in the United States—except, perhaps, the Reading Railroad, in Pennsylvania—are remembered, our estimate of .663 per ton per mile is sufficiently high. On the Reading Railroad, with a heavy transportation, the cost is found not to exceed .500 per ton per mile. If, however, we increase our estimate from .663 to 1.000 per ton per mile, we should still have, by the above table, a net income of $679,150 50, or nearly seven per cent., on a capital of $7,000,000. The amount of tonnage (258,425 tons), and number of passengers (123,000), computed in the table, are, it is believed, rather under than over the mark. The Baltimore and Ohio Railroad Company transported in 1847, over that road, two hundred and eighty-eight thousand passengers and two hundred and sixty-three thousand tons of freight.

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*Concluded from November number.

The superior advantages of railroads over every other mode of transportation, are becoming every day more apparent. Their speed, their certainty and regularity, will always ensure them the preference over river routes, at rates moderately higher. This we have seen, whenever they have been brought in competition. But nowhere would these advantages be more strikingly displayed, than upon the route in contemplation. Commencing on the seaboard, at one of the best harbors on the Gulf, it penetrates to the very heart of the Mississippi valley. It opens an avenue by which commodities can be conveyed to the Gulf in from twenty-five to thirty hours, with perfect safety, at a cost not higher than at present, by a devious and hazardous route, requiring from four to six days to accomplish. At low rates, the business of this road will only be limited by its capacity to transport. The saving of river insurance alone would be sufficient, on all articles of value, to decide transportation in favor of the road.

In a military view, this is an undertaking of the highest national importance, and well worthy the attention and favor of government. In time of war, the facility with which troops and munitions could be transmitted by this road from the interior to the seaboard, would save an immense sum to the country.

By an inspection of the map, the relations between the Mobile and Ohio Railroad and other great lines of railway now in progress, will be easily perceived. To the Baltimore and Ohio, and the Cincinnati and Sandusky railroad companies, the completion of this road will be of great value, by throwing upon those lines a large amount of travel that would otherwise seek different channels. To the cities of Louisville, Cincinnati, and St. Louis, it will open new avenues of trade, and new elements of prosperity. Like a great river, it will have its tributaries on either side, and thus draw into itself the trade of a vast country. In short, not one, among all the various projects now inviting the attention of capitalists, offers greater inducements for the investment of capital, or promises to be more valuable, as an element of national wealth, than the Mobile and Ohio Railroad.

Since the above was written, we have been kindly favored with a copy of the following letter from Professor A. D. Bache, Superintendent United States Coast Survey, to our friend and townsman S. G. Fisher, Esq., concerning the recent discoveries in Mobile Bay, made by the Survey, under the immediate direction of Lieut. Com. Pattison, United States Navy. In connection with the Mobile and Ohio Railroad, these discoveries are of the highest importance, establishing conclusively, as they do, the superior advantages of Mobile Bay over any other harbor of the Gulf, as the seaboard terminus for a great system of internal improvement.

COAST SURVEY STATION, *near Manchester, N. H., Sept.* 5, 1848.

S. GRIFFITTS FISHER, ESQ., *of Mobile.*

Dear Sir: In reply to your request, for the most recent information in regard to the changes at the entrance to Mobile Bay, and to the depth of water of 20¼ feet upon the bar, I send you the following extracts from a recent report by Lieut. Com. C. P. Pattison, United States Navy, the Assistant in the Coast Survey, to whom the credit is due for the excellent progress and interesting discoveries made in the hydrography of that section of the survey:

1st. The depth of water which can be carried over the bar at the entrance of Mobile Bay at mean low water, is 20¼ feet mean rise, and fall of tide one foot.

2d. The channel is perfectly easy, one course N. 19° W. true, going through with one or two casts on the ridge of shoalest water.

3d. Continued strong northerly winds depress the water at the extreme 2 feet below mean low water; and continued south-east and south winds elevate it 2¼ feet—in rare cases to an extreme of 4 feet.

4th. In heavy gales, the sea is said to break across the bar. This I have never seen, but judge it must be the case.

5th. After crossing the bar the channel varies from one-half to seven-eighths of a mile in width, averaging 7 fathoms in depth, and perfectly clear.

6th. The depth of water immediately at the end of the wharf at Fort Morgan, Mobile Point, is 8¼ feet; 150 yards out, there are 5 fathoms; and in mid-channel, abreast of the wharf, one-third of a mile out, there are 9 fathoms.

7th. The depth of water at the anchorage of the fleet of merchant vessels in the bay, is 3¼ fathoms. There is perfectly secure anchorage, in any winds, for large vessels off the west end of Mobile Point, with the light-house bearing from S. E. to S. S. W. in from 8 to 10 fathoms water, and distant from the shore from one to one-tenth of a mile.

8th. There is a fine harbor for small vessels drawing not over 12 feet in Navy Cove, just to the north end of Mobile Point, secure in all winds, and easy of entrance.

9th. Pelican Island in 1822 was 1,723 yards long, in 1841 it was 2,757, and in 1847 it had increased to 3,457 yards, making an increase of 1,735 yards in 25 years. The north end of this island had made a few yards further out in 1848. The shore of Dauphin Island, to the northward of Pelican, had cut out a few yards, so keeping the distance between them nearly the same.

10th. The distance between the north end of Pelican Island and Dauphin Island in 1822 was 1,957 yards; in 1841, it was 788; and in 1847 it was but 383 yards. The depth through this channel has remained the same since 1822, being 13 feet at mean low water.

11th. Sand Island, upon which stands the outer light-house, was in 1822 but 131 yards across; in 1841, it was 1,542 in length; and in 1847, it had decreased to 908 yards. This island is constantly undergoing increasing or decreasing, as the various causes of change act upon it. Within the last year the north point has been cut off for a distance of 60 yards, and the east shore for an average width of 15; whilst the shore to the north of the light-house has made out 60 yards. A small channel 10 or 15 yards wide, and 6 feet deep, which separated the north point from a small bank dry at low water was filled during one spring ebb tide.

12th. Little Sand Island, as it is called, where was in 1822 from 3 to 10 feet water, had made up into an island in 1841 of 952 yards in length, and increased to 2,025 yards in 1847.

13th. In 1822 the greatest depth which could be taken over the bar was 17 feet: in 1841 it was 19 feet; and in 1847 it was 20½ feet, each at mean low water.

14th. In 1822, the distance from the position in which Sand Island light-house now stands, to the shoalest water in the channel on the bar, was 3,446 yards; in 1841, it was 3,531; and in 1847, it was 3,724 yards.

15th. Upon a line of soundings which took over the bar in 1841 but 13 feet, in 1847 the depth was 20 feet.

16th. The changes constantly taking place cannot better be illustrated than by the frequent appearance and disappearance of Little Pelican Island, which is often several feet above water, and as often as many below it.

From these facts, it appears that the islands have been on the increase since 1822, whilst the bar itself, connected with them, has passed gradually seaward, deepening as it advanced.

Yours, respectfully and truly,

A. D. Bache, *Sup't United States Coast Survey.*

MISCELLANEOUS.

1. OUR RELATIONS WITH CUBA.

New York City, Oct. 2, 1849.

Dear Sir—During an absence of some three months from home, I have been deprived of the pleasure and instruction I derive, at other times, from reading your excellent Review. I am thus ignorant of the line of conduct which you may have advocated for our country, in relation to Cuban affairs; indeed, I do not know whether you have yet entertained the subject in the pages of your Review. The future political condition of Cuba is of vast moment to the whole country, and especially to us of the South; and the present agitation of this matter will not, probably, subside until it shall be settled whether Cuba shall remain for many years as she now is, a colony of Spain, or become the possession of some other power. Its separate and permanent independence, I regard as an impracticable condition, in the present state of the world. We all remember that, within a few years, the authorities of Spain, and of the local Cuban government, united, found it extremely difficult to resist the intrigues and plottings of British agents, who attempted to effect the abolition of slavery, by exciting the slaves to insurrection, and to a repetition of the horrors and massacres of San Domingo. Were Cuba independent, these diabolical schemes would be immediately resumed, and with much prospect of success. Cuba could not enjoy its independence in tranquility, nor can we allow it to be transferred to any other European power; it must, therefore, continue to belong to Spain, or become ours. It may be our duty, hereafter, to take possession of it, to prevent its falling into other hands, but while no such danger threatens, it has appeared to me the soundest policy for us not to disturb the present relations of that island. Contemplating the subject solely in reference to ourselves, and leaving out of view our duties toward Spain, I threw together, a few days since, some thoughts on the annexation of Cuba, which were published in the New York Journal of Commerce; I have taken the liberty of inclosing to you a slip containing them; you will see that they were written *amente calamo*, not having been even copied for the press. I am aware that I have not begun to exhaust the subject, but have rather endeavored to glance at some considerations which form insuperable objections, especially for the South, to Cuban annexation. That the Cubans themselves would be greatly advantaged by their incorporation into our Union, is to me clear; but this is not the whole matter. To what wrongs is not interference in the affairs of other communities continually giving rise? Let us not furnish an example to countenance the despotic governments of the old world. I have no doubt but that the American government, whoever may be at the helm, will perform its duty of good neighborhood toward Spain, by forbidding, within our borders, the organization of armed expeditions against its possessions; still it would be, in practice, easy for citizens of the United States to interfere, efficiently, without violating our obligations as a nation, and in despite of law. It is, therefore, important for us as a people, clearly to perceive our interest, and rightly to understand our duty.

I suppose Spain might be induced to sell Cuba for a *sufficient* price; we should then have a national debt in earnest. It would fall lightly on the North, for the commerce of Cuba, and its consumption of northern manufactures, would more than overbalance the tax on that section. It would be a dead burden on southern industry. Were a moderate portion of the sum which it has been proposed to pay for Cuba, appropriated to the building of a railroad between the great Mississippi valley and the Pacific ocean, it would call into immediate existence a commerce infinitely more valuable than that of Cuba ever can be, and of which the benefits would be poured into every State of the Union; it would, at once, adapt for beneficial occupancy by our own citizens the great central wilderness of our country, a region many times more extensive than the island of Cuba.

In reference to the feelings with which Spain must regard Cuban annexation, I may here mention that in a conversation I held, in 1844, with Senor Martinez de la Rosa, then Spanish embassador at Paris, and afterward prime minister of Spain, he said there existed the entirest unanimity of all parties in Spain, in relation to Cuba, that they would not relinquish it in any manner, to any power, nor for any consideration; its possession for Spain was a matter of national interest and national honor.

I am aware that something may be said in favor of Cuban annexation, the chief of which, to my mind, is, that that island is the key to the West Indies and the Gulf of Mexico. But this is, after all, of minor moment; let us continue to increase, spread and strengthen ourselves, on the mainland of North America, and we shall be *able to make keys*, or *to take keys ready made*, whenever we may want them.

I am, truly and sincerely, yours,

ASHBEL SMITH.

2. THE CUBA QUESTION.

[We annex a letter from Mr. Ashbel Smith, published in New York, which will be read with interest.—ED.]

SIR—Public attention has, of late, been much attracted to Cuban affairs. There are two distinct matters; one is an anticipated insurrection in Cuba to throw off the Spanish yoke; the other is the annexation or incorporation of that island into the American Union. Annexation is, doubtless, regarded as one of the contingencies of a successful revolution. Though these two matters are thus connected, it suits my purpose to consider them separately, as my few remarks will be wholly devoted to the latter, to wit, the annexation of Cuba. It is true, that the United States are bound by treaty not to take possession of Cuba, yet hitherto, in the history of the world, treaty stipulations have formed no obstacle to acquisitions of territory by one power from another; nor need we expect that our country will form an exception to the practice of nations. I regard, then, our treaty obligations as likely to interpose but a slight barrier to the annexation of Cuba; I shall, therefore, consider it as a very possible contingency, and to be met as a practical question.

The annexation of Cuba would be fatal to the interests of the slaveholding States; and in different ways.

The sugar planters of Louisiana and Texas would be immediately smitten with ruin. Cuba, peaceably annexed to the United States, under the advantage of a stable government, such as annexation ought to give it, would drive our southern sugars out of the market. What, then, would our planters do? Return to cotton, with a total loss of the immense properties now invested in sugar planting? Cotton planting is already overdone, and in many districts of large extent—I speak of nearly all the northern cotton growing belt of the southern States—scarcely affords remunerating returns. Cotton which may now be set down as ruling at 7 or 8 cents, would fall to 3 or 4 cents; a frightful depreciation of Southern property, which would cause the complete ruin of a large proportion of the small planters. Besides, the cotton crop has proved so uncertain in the Gulf districts of Louisiana and Texas, as to render these regions practically not well adapted to its culture.

By the consequences resulting to the two great staples of cotton and sugar, from the annexation of Cuba, slave property in all the northern slaveholding States, viz., Maryland, Virginia, North Carolina and Kentucky, would at once be rendered nearly worthless; for their value in these States depends not a little on the profitableness of their labor in more favored districts further south. The annexation of Cuba would be more disastrous to the slaves even than their masters. The profits of their labor being greatly impaired, the slave would be worse fed, worse clothed, less cared for in sickness, and his habits of good conduct less attended to by the master, at first from inability of the master, and in time, probably from disinclination.

It is some three months since I left my home, in Texas, during which time I have seen the southern newspapers only occasionally. They are, I believe, silent on the annexation of Cuba; but so far as I have conversed with southern gentlemen here, I find them very generally opposed to the measure. The feeling about Cuban annexation has been raised and fanned in this section of the Union. That Cuba, being slaveholding, would add to the political strength of the South, is less than the dust of the balance; it is gross humbug. While this Union lasts, and every patriot must pray that it be perpetual, we must rely on the justice of the North, to abide by the adjustments of the constitution, not to interfere with slavery. The addition of a couple of senators, and a few representatives, will not materially strengthen us. If it seem to be gain at first, it will prove, in the end, utter weakness. The harmony of this nation, the strength of this Union, are not to be promoted by the incorporation of such materials as make up the island of Cuba. It would be no injustice to expect facile corruptibility, in any delegation that may be elected by a people on this side of the Atlantic, of Spanish origin. I need not intimate in which section of our country are found the means to corrupt; it is sufficient that from such a delegation we might anticipate the commencement of a system of corruption which would rot our government to the core in our own day.

The annexation of Cuba would furnish new occasions for abolition and antislavery excitements, and for the exercise of that baneful spirit of fanaticism and disunion which may, peradventure, be put down by the good and patriotic of all parties, on the settlement of the California questions, unless new disputable matter be thrown as firebrands among us. Our right to carry our slaves over the seas, in our vessels, between one slaveholding State and another, would be hotly contested, and continually interfered with. British cruisers, powerfully supported, would incessantly watch and annoy our intercourse with Cuba, and in the end would not fail to embroil us with England; though I should not fear this, while a harmonious feeling shall subsist among ourselves. Nor do I make much account of the fact, that Spain, being deprived of Cuba, would naturally be arrayed, and with sorest feelings, with other European powers, against the slave States of the South; yet, under some circumstances, it is a consideration of no mean weight. I set aside, too, the right asserted by Lord Wm. Bentinck, and affirmed by Lord Palmerston, in Parliament, of Great Britain to take Cuba in compensation of the Spanish debt due British bondholders. With justice on our side, we do not fear Europe. Yet peace is indeed well worth preserving: and it is high wisdom to strengthen our relations of amity and interest with other nations, in the view of possible wars. And it may not be out of place to state here, that, some five years ago, when war seemed imminent between our country and Great Britain, the British government was determined to ally France and Spain with itself against us; and that in the overtures to the two latter powers, a portion of Mexico was suggested for a prince of Louis Philippe's dynasty, and the restoration of a portion of her former continental colonies was to be the reward of Spain. But I return to the simple question of the annexation of Cuba. It would be a Greek gift, fatal to the South; it would be the shirt of Nessus to the Herculean strength of the American government.

Should annexation take place peaceably, and all seem to work well, it will hereafter stop the South from saying aught against the annexation of Canada, should the latter measure be deemed profitable to the North. We should have it thrown in our teeth, that the North had annexed Cuba for the South.

If Cuba be annexed peaceably, its rich commerce becomes the almost exclusive property of the northern merchants; its great home market will be supplied by northern manufacturers. The northern merchants and manufacturers are, therefore, tempted to desire its acquisition. If Cuba be annexed, it complicates and embarrasses the slave question among ourselves, and disembarrasses another great nation, Spain. The numerous abolitionists must, therefore, covet its acquisition, as a new firebrand. And thus, so far as I am informed, Cuban annexation originated, and has been favored, in the northern section of the Union.

Every sensible southern man, every true patriot throughout the country, must deprecate the annexation of Cuba to our confederacy.

Very truly, yours, A. S.

3. CUBA AND ITS RESOURCES.

This beautiful island, one of the earliest discoveries of the great Admiral, has been known to Europe since 1492, and has borne successively the names of Juana, Fernandina, Santiago, and Ave Maria, and has found refuge from this confusion of titles, in the aboriginal appellation. The most westerly of the Antilles, it equals, in area, that of all the other West Indies together; and is the one of the large islands which approaches nearest the North American continent, one hundred and thirty miles from which, an eminent Cuban naturalist maintains, by some great convulsion of nature, at no very remote day, it has been separated. The length of the island, which extends nearly east and west, from the 74° to 85° west of Greenwich, is about 600 miles, and its average breadth is about 100 miles—between the 20th and 25th parallels of north latitude. It is blessed with the prodigal fertility of tropical climates, while the elevation of its mountains permits the productions of colder climates to thrive. This lofty range of mountains, extending from Cape San Antonio to the Punta de Maysi, divides the island into two equal portions, and on its declivities, and in its valleys, are regions as fertile and as healthful as any in the world. Rising to the height of 8500 feet, it contains the sources of various streams which abound with peculiar and delicious fish, and which bring down no inconsiderable portion of gold dust, once esteemed of importance, but which now is neglected because the labor necessary to collect it, if expended in the cultivation of the soil, would yield thrice the return. The mountains also abound in other mineral wealth, among which are copper, which, since the completion of a portion of an elaborate system of railroads, 195 miles of which are now in operation, have proved most profitable investments. Principally in the hands of foreign capitalists, they employ many thousand miners, the wants of whom provide, for the small planters, that greatest of all protections and encouragements, a home market.

Marble and coal are also known to exist in inexhaustible quantities, and the value of the latter is daily becoming more apparent from the rapid consumption of wood by the immense *asukanas*, or sugar estates of the island. This coal, exceedingly bituminous, is evidently an out-crop of the great asphaltum beds, which, in more than one of the Antilles, evince themselves in the lakes of mineral tar. It is now employed in the gas-works of the city of Havanna, and has been found of great purity and good quality.

The island abounds in magnificent harbors, one of which, that of Havanna—named, tradition says, from an Indian goddess of that name, a statue of whom is placed over more than one of the gates of the city—is probably the best in the world. With a narrow entrance, expanding into a magnificent bay, it is capable of inclosing the navy of the world, and from the earliest day has been so carefully fortified as to be considered impregnable.

The climate is, when we consider the latitude, salubrious—the year being divided into a dry and a wet season. The warmest portion of the year is July and August, when the mean temperature of each day is about 84° Fahrenheit. The coldest is in December, when the mercury ranges at about 50°, except when the wind, known as *el norte*, blows, during which the instrument shows a rapid declension.

So fertile a soil is not known to exist in any other portion of the globe. It has been known to produce three crops a year, and in ordinary seasons two may be relied on. The profusion of its flora, the variety of its forests, are unsurpassed; while the multitude of its climbing shrubs give a luxuriant richness to its scenery, which contributes to make it one of the most fascinating countries in the world. Nowhere is life so easily supported, and is man so delicately nurtured. In addition to the plaintain, the yuca of two varieties, the potato, yam, Indian corn, rice, melons, chesenut, cocoanut, pineapple, amana, or custard-apple, medlar, banana, orange, lemon, shadock, and lime abound. The growth of the forests comprise the mahogany tree, cedar, lignumvitæ, various kinds of ebony, the noble palm tree, and numerous woods for building.

On this island, capable of supporting in opulence a population equal to that of Spain, are strewn less than a million and a half of men, of which six or seven hundred thousand are white, two hundred thousand free negroes, mulattoes, and zambos, while the rest are slaves. It is supposed that but two-fifths of the island is cultivated.

The chief riches of the island result from its exports, which consist of sugar, coffee, tobacco, wax, cocoa, molasses, honey, rum, maize, &c. The first of these is infinitely the most important, and is probably the only one which is regularly increasing, in spite of the changeable seasons, hurricanes, &c. The great inincrease may be estimated from the fact, that in 1842, 617,648 boxes were exported; and in 1847, 1,274,811. The exports of the last fiscal year, ending with November, were 1,210,917. Of other articles, during the same time, were exported 708,941 *arrobas* (26 lbs.) of coffee, 205,559 hogsheads of molasses, 11,909 pipes of rum, 4,647,737 pounds of tobacco, 141,239 boxes (thousands) of cigars, and 561,826 quintals of copper ore.

The cultivation of coffee has nearly been destroyed. Nothing shows the great decline of the trade more than the fact that, in 1837, 2,133,567 *arrobas* were exported, while in 1848 there were only 708,491. The consequence is, that a great portion of the *cafetal* are now abandoned, and the land appropriated to grazing, sugar estates, or rice plantations. The tobacco crop rapidly increases, and will as long as the passion for Havanna and Principe cigars shall last. The plant is peculiarly different from our own, maturing in less time, and the soil is able always to bring two crops per annum. In 1842 the crop was 5,942,833 lbs.; in 1847 it rose to more than 9,000,000. That of 1848 was somewhat diminished by a season unusually unpropitious, and by hurricanes.

The following table shows that there has been a gradual increase of exports for many years, and of consequent prosperity:

	Yearly av. of imports and exports.	Increase in five years.	Per centage of increase.
1829 to 1832,	$30,029,111		
1833 to 1837,	36,314,956	$5,995,745	14.9 per cent.
1838 to 1842,	49,073,615	12,759,659	25.9 "
1843 to 1847,	50,149,797	1,076,182	2.1 "

The number of arrivals during 1847, at its ports, was 3,740, and the number of clearances 3,346. The amount of American tonnage employed in trade with it is 476,773 tons.—*Washington Republic.*

4. THE CANADAS.

The subjoined interesting account of the progress of the Canadas is prepared by the editors of the *Montreal Herald*, from an official paper compiled by the Board of Statistics of that city:

	Acres.
Lands surveyed in Lower Canada,	18,871,040
" " Upper Canada,	15,902,006
Given for public uses, to 1845, in Lower Canada,	3,424,213
Granted to individuals, &c., to do. in do.	11,343,629

To support the Clergy in Upper Canada,	2,142,145
Grants to individuals, &c., in Upper Canada,	12,242,838
Sales in Lower Canada since 1845, about	500,000

Between the years 1836 and '47, 933,229 acres were disposed of by the Crown, in Canada East, by sale or gift; and 2,145,502 acres in Canada West. These figures, however, furnish little indication of the actual amount of settlement in either section, as they include large grants, or sales, to individuals far beyond the capacity of the grantors to occupy or cultivate, and do not include the sales of wild land made by individuals to settlers. The average price of public lands in Canada West, is given, for several years, to 1840, in which year the prices are reported at $2.23 per acre for Crown lands, $2.53 for Clergy Reserves, and $2.50 for School Lands—the two latter classes being often found, in detached lots, in settled parts of the country. The price has not varied very considerably since. *There are still vast wildernesses unsurveyed.*

The Canadas contain about 1,491,626 inhabitants; and in 23 years Upper Canada has increased its numbers 565,265, and Lower Canada 334,704. The population of Lower Canada doubles in 30 years—that of Upper Canada in 11 years, immigration inclusive.

In Upper Canada, the paupers are one in every 1,469 persons; in Lower Canada, one in every 151. Lower Canada makes no public provision for its poor, except the monastic establishments. The proportion of the sexes in the Canadas is about 88 females to 100 males. Lower Canada furnishes no statistics either of schools or school attendance. The number of male farm-servants in Upper Canada, in 1842, was 3,184, and in 1848 had increased to 7,514.

The Church of England, established in 1791 (by a British act of Parliament), in Upper Canada, included 116,340 of the people, leaving 556,952 dissenters from that mode of worship.

The official value of assessed property in Canada West, in 1848, was $34,268,000, but the absurd mode of assessment renders this return useless, as an estimate of its actual worth. Between 1825 and 1848, the number of grist-mills had increased from 232 to 527, and of saw-mills from 394 to 1,489; the number of acres under cultivation from 535,212 to 2,673,820; of houses from 8,876 to 42,957, and of horses, oxen, milch cows, and young cattle together, from 121,206 to 481,417. The quantity of cultivated land is 2,663,820 acres to a population of 723,292; the number of horses and neat cattle 717,233. In 1825 there were 587 pleasure carriages—in 1847 there were 4,685.

The grain and potato crop in Upper Canada, in 1847, was—

Wheat,	7,558,773	bushels.
Barley,	515,727	"
Oats,	7,055,730	"
Rye,	446,293	"
Maize,	1,137,555	"
Buckwheat,	432,573	"
Peas,	1,753,846	"
Potatoes,	4,751,331	"

The value of this crop we find estimated at $10,705,140. Of wheat, 10½ bushels were raised to each inhabitant.

Mr. Crofton, Secretary to the Board, estimates the crop of maple sugar in Canada West, last year, at 2,080½ tons; the product of wool was 2,339,756 lbs., and of beef and pork 99,251 barrels.

In the United Province, there are 661 fulling and carding mills, 130 breweries, 174 distilleries, 389 tanneries, 1,740 asheries, 10 paper mills, 19 trip hammers, 14 oil mills, and 9 nail factories. Also, in Western Canada, 1 rope walk, 1 candle factory, 1 cement mill, 1 salæratus factory, 8 soap factories, 11 pail factories, 1 last factory, 3 tobacco factories, 2 steam engine factories, 1 ship-yard, 3 potteries, 1 vinegar factory, 5 chair factories, 2 brick yards, 1 axe factory, 6 plaster mills, 1 comb factory, 10 shingle mills, 67 woollen factories, and 105 foundries.

Some of these factories in Upper Canada, produced, last year, 624,971 yards of fulled cloth; 1,295,172 yards of flannel, and 71,815 yards of linen. There are no shipping tables beyond 1840.

The interest on the public debt of the Canadas, in 1847, is stated at $593,056.

It has probably increased since. The *Montreal Herald* thinks that the income from public works alone will soon pay the interest on the debt, and yield a surplus besides; meantime the taxes paid for provincial purposes, are stated at $1,916,176, for 1848, or about $1.13 per inhabitant. This includes the customs and tonnage duties.

The estimated value (on this side) of products exported to the United States, in 1847, is, for flour, butter, ashes, wool, horses, and wheat, $250,363; and for 1848, same exports, $1,859,365. Of flour alone, the value exported, last year, to the United States, was $1,243,862. The Canada Custom House return of exports, in 1848, is stated at $10,451,404, of which $3,089,728 value went to the United States, lumber inclusive. Several saw-mills in Upper Canada, return collectively 200,000,000 feet, sawn in 1848; much of it passes down the Erie Canal.

Among the imports into Canada, in 1847, were 20,673,389 lbs. sugar and molasses, and 1,101,621 lbs. coffee; 3,750,000 lbs. tea are supposed to be consumed yearly. Beside 553,849 gallons of wine and spirits, imported in 1847, 2,134,721 gallons of whisky were distilled in the country.

5. NORTH CAROLINA.

CHARLOTTE, SEPT. 29, 1849.

Mr. J. D. B. De Bow—Your favor was received a few days since, and an answer to it has been delayed, by a temporary absence from this place. I have felt much interest in the success of your periodical. I have been for sometime considering the propriety of preparing an article on North Carolina—which would present a fair view of her commercial, agricultural and manufacturing condition. She possesses so many advantages of soil and climate, and exhibits so great variety in her natural capacities, that I have deeply regretted that she was so little appreciated and so badly understood. But the present is a most inauspicious period to undertake the subject with any hope of doing justice to its claims. Our information must be derived from census returns, and from the observations of intelligent persons, scattered throughout her limits. As to the former, that of 1840, if it had been taken with accuracy, is now too old to be of much value—especially as, since that time, we have erected many cotton factories throughout the State, of which we have no accurate information, and have made many discoveries in gold mines, and embarked much capital in that branch of business, in regard to which the last census could give no idea, I had determined therefore to wait until the information could be prepared from authentic sources, and something like justice done to the State. I may add, in this connection, that the State is advancing and her prospects are brighter than at any former period. Several works of internal improvement of great importance are now in a course of prosecution, which when completed will exert a most important influence. Of these, the Charlotte and South Carolina Railroad, beginning at Columbia and terminating at this place, is advancing rapidly toward completion, and will bring to the rich valleys of the Yadkin and Catawba, the means of immediate intercourse with the city of Charleston. This work will subserve the interests of all that region lying at the base of the Alleghany Mountains and extending eastward to the Yadkin river. I have taken the liberty to inclose to you a report, made some two years since and written by myself.

The work had its beginning in that feeble effort and is now placed beyond the chances of failure. The General Assembly of our State at its last session incorporated a company for the construction of a work two hundred and ten miles in length, from this village to Goldsboro' on the Wilmington and Weldon road. This great work spans the finest and most improvable portion of North Carolina—will accommodate a population of three hundred thousand, and bring into immediate connection with the markets of our own State, Virginia and South Carolina, a country unsurpassed in its natural fertility, in variety of production, in mineral resources and capacities for manufactories. To ensure its success the State has appropriated two millions of dollars toward the enterprise, being two-thirds of the entire capital. At the same session they incorporated a company for the construction of a plank road, beginning at Fayetteville, on the Cape Fear River, and extending to Salisbury, on the Yadkin, in the western portion of the State. The entire stock of this work is now taken, and its construction is in progress. This road will be one hundred and twenty miles in length, and will be the first work of this description undertaken in the South. Of its completion there is no question.

After years of disappointment and inactivity, I trust that the State of North Carolina will yet rise superior to the obstacles which grew out of her inhospitable coast and her inconvenient geography, and march side by side with her sisters in the course of improvement. She has sons within her borders who will not fail in their labors, to bring her up to the enjoyment of the highest advantages afforded by the improvements of our times. In this state of things I have thought it advisable to delay the publication of the article you desire. It is probable that I may send you something on some branch of her interest, which may be adapted to the character of your valued periodical. I have written in great haste, and with the disadvantages of bad materials.

Respectfully, &c., JAMES W. OSBORNE.

We make the following extracts from the report referred to by Mr. Osborne:

NATURAL ADVANTAGES.

"The counties of Anson, Union, Mecklenburg, Lincoln, Iredell, Rowan, Cabarrus, Stanly and Davidson, have for many years been engaged in the culture of cotton, while the counties of Burke, Caldwell, Catawba, Wilkes, Stokes and Surry, most of them affording the most productive lands on the upper waters of the Yadkin and Catawba, are finely adapted to the production of Indian corn, wheat and other grains. To these are added great and undeveloped mineral resources, embracing ores of iron, copper and gold, scattered over its whole length and furnishing a new field for capital and enterprise. But if nature has provided it with a rich soil, she seems to have almost exhausted her energies in the amplitude of its facilities for purposes of manufacture. The innumerable streams which flow from the mountain region which lies on the north and north-west—including the two large rivers which receive them—furnish the water power to the hand of the artizan, in a state almost fitted for immediate application. Yet we cannot hide from ourselves the painful conviction, that with all these natural advantages, the interests of our country are rapidly declining, her enterprising citizens have left us in thousands—while those who remain, are unsettled, dissatisfied, and preparing to join their predecessors in other spheres where their energies may have freer scope and their labors be better rewarded."

RESOURCES AND PROSPECTS OF NORTH CAROLINA.

"An allusion has already been made to the natural advantages of Western North Carolina for a system of manufactures. Public attention has been, to some extent devoted to this subject, and within a few years, several factories of cotton have been erected, and all of them are in successful operation. Within the region of country to be benefited by this road, there are seven factories employing a capital of three hundred thousand dollars, and consuming not less than five thousand bags of cotton. By giving employment to the poor of the country and furnishing markets for almost every species of agricultural production, they have a most beneficial effect on the prosperity of the communities in which they are situated. This business was originally designed for the home market. But it has been ascertained by the experience of a few years that reliance cannot be placed on that market, and accordingly, most of those engaged in it are directing their attention to the northern cities, where it is found that the fabric of this region compares most successfully with that of the North. These arrangements divest the pursuit of all uncertainty and hazard, gives the assurance that there may be no limit to the quantity manufactured, as there is no boundary to the market to be supplied. But it cannot be expected that a branch of business so important to the welfare of the country, can be adopted to any extent proportionate to our abilities and wants, unless we have immediate access to the seaboard. With this desideratum, Western North Carolina must become the most important manufacturing region South of the Potomac. The great branches of manufacture—cotton, wool and iron—entering into the common consumption and founded on the necessary wants of the whole nation, are the great sources of employment and of wealth to the mechanical industry of America. The planting states of the South and South-west, being wholly consumers and not producers of these necessaries, are the great markets, in which they are sold by the manufacturing States of the north. The vast valley of the Mississippi, gathering to itself year by year the agricultural capital of the South, will continue to afford a demand for the coarser fabrics of cotton, wool and iron, commensurate with its population and the fertility of its soil. The coastwise navigation from the city of Charleston to the cities of the gulf, now affords a speedy and safe communication with that vast region, and railroad communications now in progress, must soon place that city in still more advantageous connection with its whole extent. It must be supplied with its implements of husbandry and coarse cotton and woolen goods for the clothing of its slaves. If we be but true to ourselves, this trade will be a source of boundless profit to ourselves. The counties of Lincoln, Catawba, Iredell, Wilkes, Ashe, Surry and Stokes, abound in iron ore of the purest qualities, and in largest quantities. In all of them, by rude and simple processes, its manufacture has been an object of pursuit. In the counties of Lincoln and Catawba it has resulted in large fortunes to individuals, much to the convenience and benefit of the whole community. But the manufacture of iron has been necessarily limited in its quantity and precarious in its progress, as it has never been designed for any thing beyond the circumscribed circle of the market, in the vicinity of the establishments. Open up a cheap and rapid communication with the city of Charleston, and millions of dollars may be employed where there are now a few thousand. It will be converted at home into the utensils and implements of husbandry and be transported in this form to the markets of the world. With the increased supply, it must be cheaper to the purchaser at home, and, at the same time, by the larger quantity sold and the speedier returns of sales, there must be increased gain to the manufacturer.

"But there is another pursuit for which the northern counties of Burke, Caldwell, Wilkes, Ashe, Surry and Iredell, are naturally adapted, to which the attention has never been directed, and, so far as your committee know, a single experiment has not been made. It is the growth and manufacture of wool for exportation. Every portion of the United States, with a similar climate, unless it be similarly cut off from intercourse with the world, has given attention to this subject. It is the obvious pursuit of all mountain regions; and, both in foreign nations and at home, every such country has her class of shepherds, who subsist by this innocent and primitive employment. Thousands of acres of land, well adapted for pasturage, are unappropriated in the mountain regions of North Carolina, and require but little capital and energy to apply them to the use for which they were mainly intended. But, like all cumbrous articles, wool does not bear our costly modes of transportation."

NORTH CAROLINA GOLD MINES.

The editor of the Ashborough (N. C.) Herald has recently been making a tour in the gold region of that State. He thus speaks of the Parker mines in Stanly county, which were discovered forty or fifty years ago, and have been worked with various success ever since:

"The gold is principally found in the small streams that flow through the mineral region, or in the low lands adjacent to them, in a stratum three or four feet below the surface. The hills are no doubt rich, but as yet their products have been small, no regular veins having been discovered. The stratum alluded to is dug up and washed in the usual way, by which process gold is found in a granular state. Lumps of considerable size are sometimes found. In 1894, on the lands of Mr. Howell Parker, a lump of four pounds ten ounces, steelyard weight, was found. In 1838 two lumps were found, one weighing three pounds, the other one pound two ounces. Many large pieces, the weight of which we could not ascertain, have been found in different localities. The gold found in these is very pure, being worth 97½ cents per pennyweight. It is greatly to be regretted that they are not worked on a more extensive scale, and with means proportioned to the profits which they yield."

"Gold Hill," in Rowan county, the editor describes as "the prince of mines in North Carolina." Discovered by Archibald Honeycutt, Esq., about seven years ago, it has since been the field of extensive and profitable operations. At this place there are three steam engines in operation, which, with the machinery thereby propelled, originally cost not less than $30,000. These engines are severally rated at forty, thirty and fifteen horse power, and grind from fifty to one hundred and twenty-five bushels of ore per day, and consume from sixty to eighty cords of wood per month. The three companies at this place have one hundred and sixty laborers in their employ, whose wages range from $5 to $40 per month. Experienced English miners, who work under ground, receive $40 per month: slaves who attend them, $13.

6. THE SWORD AND THE OLIVE BRANCH.*

J. D. B. DeBow—In the civil difficulties with Mexico we proceeded altogether wrong. If she would not accept an embassador from us, Almonte having left Washington, why try to force ours upon her? If she was willing to receive a commissioner as to boundary, we could have met her on this ground by arraying Mr. Slidell in plainer robes. If the American Executive had studied the bounds here as clearly as he did those of Oregon, then his opinion might not have had the concurrence of the Senate and House. Calhoun, Benton and Ingersoll, did not believe that we had good claim to the Rio Grande. But Congress should have been asked to define the boundary, and by resolution declared its demands and given to the President authority, instructions and, if need be (Mexico recusant), troops and money. Neither Parades nor Polk possessed powers to make war or to declare war. Skirmishes on a frontier, shedding of blood on debatable ground, do not create nor constitute war. The attack by the Leopard on the Chesapeake did not produce war, owing to the wisdom of Mr. Jefferson. The invasion of Schlosser and the burning of the Caroline did not produce war, owing to the wisdom of Van Buren, Harrison and Tyler.

By the march from Corpus Christi to the Rio Grande, without any resolve of our Congress, Mr. Polk produced the war, not declared by either Mexico or the United States, the former defending her soil, and we insisting that war thus existed by act of Mexico, and yet issuing no declaration. Such conduct should not be permitted under written constitutions, or an ambitious Executive can always create war by army or navy movements. Mr. Polk should have been rebuked, and the war checked at the outset.

As things proceeded, the Congress admitting war to exist, Mr. Polk should have studied his plans. New Mexico and California were his objects. The former was not worth possessing, and the latter less so, save only some harbors on the Pacific. He should have called Gen. Scott into his councils (not leaving him to details in old Marcy's closet), and asked advice. He would have told him to let Louisiana and Arkansas aid Texas to defend the Rio Grande frontier. It would have been defended, and not a Mexican would have crossed who would not be glad to get back again. The commander-in-chief would have advised one or two lines of operation, or an active army, and one of observation. If Gen. Taylor had been ordered to Tampico, and San Louis threatened or attacked, Point Isabel garrisoned, and the navy watching the coast, no movement could be made upon Texas by the Mexicans. If Gen. Scott could have had placed at his disposal, fifteen or twenty thousand good troops, and ten or fifteen millions of money, Vera Cruz would have been seized at once, and the onward march to the city of Mexico would have been over a plain road, and the muscles of the men not even strained on the march. Thus peace is conquered and the boundary fixed. Mexico could not treat, under her constitution, as to cession of her territory; but we seize and she is compelled to submit. If any of her territory was worth anything, it would be only such as would conduct us to the Pacific, across the Isthmus, by railroad, canal, or turnpike, or highway, and we to hold ports on both seas. San Francisco is what we want (and all that Gen. Jackson cared for); but you can have, also, San Diego and the Pacific Monterey. Our want was merely access to China and India, Peru, Chili, &c. This thing could all have been effected in a few months, without much treasure, and with the sacrifice of but few lives in battle. But our civil Chief saw proper to follow cabinet advice from incompetent men (*imbeciles*), and Gen. Taylor, by orders from Washington, breaks up at Corpus Christi and marches west with a grand army of two thousand five hundred men all told. The Mexicans meet him at the Sal Colorado, and insist on his halt. He crosses and marches on. He captures Point Isabel, in possession of the Mexicans, and the station of a custom house and some troops. If the ground was debatable, this was unsanctioned by the laws of nations, as much so as if he had captured Matamoras on the other side of the river. The Americans move on and take post opposite this town, drums beating and colors flying, and tents pitched and works thrown up, and the Mexicans are told, in reply to their questions, that the Star Flag should float there as long as there was a star in the heavens. If this was not declaring war (even by incompetent authority), I do not know what could be. Mr. Calhoun and Mr. Clayton, I think, should have interfered soon as practicable, though they could not arrest the march or the first battles when they were told of the orders. They left the administration to its own course and resources, perhaps because 54° 40′ of Oregon threatened war with England. A most wise administration, to have two wars on hand at once! The difficulty first settled with England, on the 49° basis, and Mexico would not have dared to beard us. She was encouraged with the assurance and belief that the power of England would back her in her quarrel with us.

Gen. Taylor was ordered to take post opposite Matamoras. One moment's reflection would have convinced the President and Mr. Marcy that a fight must ensue. A few old women practicing billingsgate, a few boys throwing stones across the river, and lead and iron would be sure to follow. The Mexicans were underrated; even Gen. Taylor, and Twiggs, and Worth, were led into the mistake that they would not fight. Why, they had been fighting for forty years, and many of them lived upon this food! Mr. Benton (to his credit be it spoken) said, in secret session, that they might be called a warlike people, bred to arms, and that if there were but one Mexican in the nation, and he not bigger than Tom Thumb, that he would fight. Mr. Polk and Mr. Marcy should thus have cautioned and instructed Gen. Taylor, particularly as they did not give him money enough for secret services. Hence, at that time untutored and ignorant of the state of affairs west of the Rio Grande, he was led into false security.

A position should have been taken as low down the Rio Grande as wood and ground would allow. The navy should be at hand with its cannon and boats. Now, if Arista crossed the river, his fate is sealed. If he advances toward the Nueces or San Antonio, the Texans are ready for him. If he advances toward Point Isabel, he is too late: Taylor has crossed to the west, stolen a march upon him, and Matamoras is taken in the rear. If pontoons had been supplied to Taylor, Arista is captured also; for the Texans have him in front and in flank, and the pontoons give the American General the command of both banks of the river. Indeed, guarding the fords, which are few, Arista could not escape by crossing to the west; and by his advancing to the east he must perish by inches.

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* See number for September last.

So much effected, Gen. Taylor (if the plan of campaign had been rightly ordered) takes water and seizes upon Tampico. This should have been the initiative, if the war was to continue after the boundary was vindicated. The Texans guard their frontier—of course efficiently—by small aid of their neighbor States.

But I think it would have been more wise to have declined the initiative, and halted this side of the Rio Grande, the Mexicans being repulsed.

Notwithstanding what Mr. Houston has said, that, in the annexation of Texas, we took her war along with the possession, I deny that the one was the sequence of the other. The Mexicans could not have carried the war into Texas, though they might have declined peaceful relations. We had nothing to do but to act prudently, acquire what belonged to Texas, and treat as to the boundary west. No armed force was needed, and if any invasion was apprehended, a few troops of dragoons and a few companies of light artillery, intermixed with Texan volunteers, were quite enough on the borders of the Nueces. The idle attempts to force Mr. Slidell upon Mexico as an embassador, was making bad worse. Mr. Slidell's communication that he would not be received, should not have produced the orders of march for Gen. Taylor. Parades had enough to do at home to sustain himself, and was not strong enough to carry on successful foreign war.

It is absurd to say that the act of annexing Texas was the primary cause of the war. Ceding to Spain beyond the Sabine, yielding the sources of Red River and Arkansas, by treaty of 1819, was a more remote cause; for we could not cede what belonged to us; and a portion of this cession was clearly a part of Louisiana, as clearly as that Santa Fe belonged to Spain. Public opinion never sanctioned this treaty of steps and curves and abandonment of the sources of our great rivers, and hence the uneasiness and restlessness to get back what was given away by artful and unpatriotic northern diplomacy. When, by the unskillfulness of the Mexican President in his Texan campaign, he and his troops were captured and repelled, and Texas became an independent nation by the admission of the Great Powers, she had a right to join our confederacy, and we had an equal right to embrace her. The western boundary was questionable. Mexico occupied beyond the Nueces the ground claimed by Coahuila and Tamaulipas; Texas had not conquered this portion, and her proclamation, by any act of her constitution as to State boundaries, did not give her title; for, though the sword might have obtained the claim, a few scratches of the pen could not give possession. This open question between Mexico and us (for now it became the business of the United States), was a matter to be arbitrated by negotiation, and not by war. Our blundering brought the war upon us: 1st, cession to Spain; 2d, forcing Slidell as embassador, when a commissioner would have been received; 3d, movement of troops, under Gen. Taylor, to Corpus Christi, and more especially to the Rio Grande, opposite Matamoras; 4th, bad and threatening position of our troops, and the smallness of their number; 5th, passing Rio Grande and occupancy of Matamoras. If, after the other four blunders, we had halted on the eastern bank of the Rio Grande, we could have had peace by paying for territory west of the Nueces, and it would have been graceful to have done so. It would have been more graceful to have left the desert as neutral ground. The boundary would have been better—and a good boundary is better than title to a poor region and one-half of a stream not worth having. Mexicans and Americans, on opposite sides of the Rio Grande, would always be engaged in quarrels. Fugitive slaves would produce these, in despite of honest efforts on both sides. Southern planters would be compelled, from frequent losses of movable property, to decamp from such a stream, and northern people reject the territory. Mr. Jefferson, in my opinion, with his far-seeing eye, beheld the truth of this matter long ago, and at a great distance.

Had our federal Executive settled with England as to Oregon, before Gen. Taylor was ordered to march forward, there would have been no war. Mexico believed herself strongly backed, or she would not have advanced in hostile array. This may be called the sixth cause of the war; and there is still a seventh: Congress should not have admitted, by resolution, that war existed by act of Mexico. Arista committed hostilities, for he seemed threatened. The orders of President Parades might produce fighting, but he could not declare war. Congress should, therefore, have required the Executive to repel the enemy beyond the Rio Grande, and to take strong posts on the eastern side of the river. The boundary would have been settled, and peace followed. Our Congress should have so acted as to refuse to allow to our Executive the power of producing war. This conduct would have been a beautiful illustration of the theory of our constitution, which *repudiates* the *one man power*, and confides the welfare of the republic to the representatives of the sovereign people and the federal States. Whigs and democrats in Congress assembled (to say nothing of the Chief Magistrate, his blunders and self-will), are equally blamable for the commencement and progress of this war.

In the spring of 1844 Gen. Taylor is placed in command of an army of observation near the Sabine, pending the Texas negotiation. In June, 1845, Sloat, in the Pacific, receives instructions, looking to a state of hostilities. On the 23d of July, 1845, Gen. Taylor sails from New Orleans for Aransas Bay. On the 3d of August he lands at St. Joseph's island, near the mouth of the Nueces. He encamps and winters on the west bank of the river, claimed by Tamaulipas. In November, 1845, Fremont, in California, receives instructions. On the 13th of January, 1846, Mr. Marcy orders forward movement to the Rio Grande, and Gen. Taylor marches on the 11th of March. Now here was time enough for an inquisitive Congress to find out, by resolution, what was going on; and, the orders being produced, all forward movement is prevented. Had the whigs (who style themselves the *conservative* party, and who had the strength) moved in check, the war-castle could not have marched.

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7. ODD FELLOWS IN UNITED STATES.

From the annual report of James L. Ridgely, Esq., Recording and Corresponding Secretary of the Independent Order of Odd Fellows, Grand Lodge of the United States, showing the onward progress of the Order in the United States :

Lodges.	No. of Lodges.	Initiations.	Revenue of subordinate Lodges.	Contributing Members	No of Brothers Relieved.	Total am't of Relief.
Maryland,	66	1,501	$65,582 46	8,592	1,805	$33,984 73
Massachusetts,	130	752	57,760 46	11,881	1,210	31,914 41
New York,	216	2,786	160,705 26	22,872	3,376	73,332 72
Pennsylvania,	363	2,201	172,757 18	33,268	5,557	83,043 97
District of Columbia,	13	116	6,971 91	1,216	27	3,841 73
Delaware,	21	339	12,363 29	1,447	199	2,378 00
Ohio,	133	1,792	66,115 30	9,546	1,250	22,676 68
Louisiana,	23	437	28,538 40	1,819	193	8,115 00
New Jersey,	90	1,204	45,586 29	7,136	1,017	16,767 11
Kentucky,	56	663	26,870 78	2,921	303	14,250 83
Virginia,	77	1,113	31,207 09	4,896	708	11,095 83
Indiana,	66	682	31,202 73	2,836	...	....
Mississippi,	36	386	18,070 37	1,443	191	4,712 24
Missouri,	40	579	21,437 13	1,932	229	6,001 90
Illinois,	56	841	18,529 28	2,518	197	3,071 95
Connecticut,	68	889	32,559 51	5,945	843	14,024 44
Tennessee,	50	553	21,843 06	2,205	146	4,372 63
Texas,	4	18	2,837 62	139	9	668 50
South Carolina,	18	334	15,290 21	1,662	121	6,461 74
Alabama,	32	328	14,201 12	1,371	126	3,406 03
North Carolina,	26	249	7,673 17	955	105	1,463 01
Georgia,	32	453	16,723 04	1,941	163	8,145 28
Maine,	58	624	22,329 19	5,886	544	10,880 38
Rhode Island,	13	94	....	1,537	222	4,650 21
New Hampshire,	29	318	5,346 00	2,400	291	5,249 98
Michigan,	43	610	15,849 33	2,743	354	3,839 32
Wisconsin,	36	534	11,138 31	1,665	...	1,027 31
Vermont,	..	...	....	.....	...	....
Iowa,	21	351	7,586 57	746	46	471 72
Arkansas,	4	43	1,682 08	144	...	12 00
Florida,	5	17	1,365 17	91	...	....
Oregon,	1	...	....	.....	...	....
Honolulu,	1	...	....	.....	...	....
California,	1	...	....	.....	...	....
Minesota,	1	...	....	.....	...	....
	1,712	23,350	$880,380 32	138,401	19,035	363,943 96

The column in the above table which gives the total amount of relief afforded by each State during the year, showing a grand total of $363,943 96, is comprised of $272,184 50 paid for the relief of 19,035 distressed brethren, $33,392 33 paid for the relief of 1,687 widowed families of deceased brethren, $6,732 25 for the education of orphans of deceased brethren, and $51,636 65 for the burial of 1,162 deceased brethren, who had died during the current year.

8. LEAD ORE IN MARION COUNTY, ARKANSAS.

The Arkansas Democrat has the following account of lead lands in that State:

" We hope the success which has attended the exploration for minerals in the vicinity of this city, will induce the people of our State, and particularly of the North and West, to make a thorough examination of every locality where indications of mineral of any kind are to be found. In Marion county there are great inducements for capitalists and miners to commence operations. The mineral lands in that county were for a long time reserved from sale, but they are now in the market, and there can be scarcely a doubt but that as good lead mines as any in the State may be obtained at $1 25 per acre. According to the field notes of the surveys now on file in the Surveyor General's office, at this city, two townships, lying only from three to six miles from flatboat navigation, on White River, are rich in lead ore. Before these lands were in market they were visited by an experienced miner, who pronounced the ore pure galena. From the examination made at that time, it is thought there is an abundance of lead in that region. We hope that the locality of which we speak will not be permitted to lie unappropriated much longer. Mines like these, which promise to reward individual enterprise so liberally, ought not to be overlooked. If this item should reach the eye of any capitalist abroad, who is disposed to go into an enterprise of this sort, we commend the subject to his attention. There is yet time f-some such a person to come here and secure a dozen fortunes in the mineral lands of Marion and Caroll counties. These lands have been in the market for more than a year, but as nobody in Arkansas seems disposed to take them up, we think they are now fair game for any one who may choose to enter them."

9. RAILROAD MEETINGS IN NEW ORLEANS.

MEETING OF THE GENERAL COUNCIL.

The special committee, to whom was referred a letter from the Mayor of Memphis inviting delegates from New Orleans to the great railroad convention to be held at that place, submitted the following resolutions:

Resolved, That we regard it as of the utmost importance to the whole Union, that a speedy and safe way of transit for passengers and merchandise be established between the Atlantic and Pacific oceans, and that we approve the project of a railroad across our own country to the Pacific, having for its eastern terminus such point or place as may be found to be most practicable and advisable; and we invite, in its behalf, the favorable consideration of the General Government, and of the States of this Union, and of individuals.

Resolved, That, considering the length of time required for the completion of such a road, that the exigencies of trade and commerce demand a present transit way of easier construction, which may be put in operation within a short period of time; that the route across the isthmus of Tehuantepec is much nearer to the United States territory, on both oceans, than the way now pursued by Chagres and Panama, or the one projected over the river San Juan and Lake Nicaragua; we request our delegates to the Memphis convention, to recommend to that body the route across the isthmus of Tehuantepec as a present medium of communication between the Atlantic and Pacific oceans, and the most expeditious and cheapest; and that they endeavor to obtain the aid and union of the members of that convention, in carrying into effect the project for the immediate construction of a railroad across the isthmus of Tehuantepec.

Resolved, That the following gentlemen be, and they are hereby, appointed delegates, on the part of the city of New Orleans, to the convention to be held at Memphis on the 23d inst.:

MAUNSEL WHITE, M. M. COHEN, ALEX. WALKER, MAJOR CHASE,
WM. A. ELMORE, J. D. B. DEBOW, JOHN M. BELL, C. G. FORSHAY.

MASS MEETING OF CITIZENS.

Resolved, That a communication across the continent of America, either by ship-canal or by railroad, between the Atlantic and Pacific oceans, is an object of the highest political and commercial importance to the government and people of the United States, necessary to bind together the different parts of our territory, and enable all our citizens to participate in and be protected by the federal government: and in the highest degree calculated to develop our resources, extend our commerce, increase the wealth and power of the country, and add to the prosperity and happiness of the people.

Resolved, That we are in favor of the construction of a railroad to the Pacific entirely within the territories of the United States, if, upon examination and survey, such road shall be ascertained to be practicable; and that we will heartily aid, so far as our efforts may avail, in the support and prosecution of such an undertaking, whatever may be the route which shall be finally determined upon.

Resolved, That while we are anxious to witness the completion of so great a national work, we cannot shut our eyes to the fact, that many years must elapse before so desirable an end can be attained, and that in the mean time some other mode of rapid communication with our territories on the Pacific, is essential to the safety and well-being of the country, and would immediately add to its commercial greatness.

Resolved, That, in our opinion, a railroad across the isthmus of Tehuantepec is the cheapest, speediest and best means of obtaining, at once, objects of such importance, and that the people of New Orleans and Louisiana ought to and will aid in its construction without delay.

Resolved, That the delegates from this State to the Memphis convention, be requested to bring this subject before that body, and endeavor to obtain its concurrence with us in behalf of the Tehuantepec railroad, as a present measure beneficial to all, and as a most powerful aid, by demonstrating the great advantages of rapid communication, in furthering the great work in favor of which the convention is convoked.

Resolved, That a permanent committee of twenty gentlemen be appointed to prepare an address to the President, asking for the negotiation of a treaty, if practicable, with the government of Mexico, permitting of the free transportation of the mails, troops and military stores of the government, and of the goods and merchandise of the citizens of the United States, across the isthmus of Tehuantepec; a memorial to Congress for the passage of a law directing the Postmaster General and Secretary of War to make yearly contracts for the transportation of the mails, troops and military stores, from the Atlantic to the Pacific ports of the United States, giving preference always to the shortest route where the price is the same; and an address to the Congress and people of the United States on the advantages of immediately constructing a railroad at Tehuantepec, and generally to further the object which this meeting has in view.

Resolved, That, in the opinion of this meeting, an object so vitally concerning the interests of the city of New Orleans, deserves the support and co-operation of the several municipalities of New Orleans: that, with this view, our senators and representatives be respectfully invited to urge, at the approaching session of the Legislature, the passage of a law authorizing the councils to lend their aid, both in the preliminary examinations and in the subsequent execution of the proposed works, in such manner and to such extent as shall to said councils appear expedient and proper.

Resolved, That the permanent committee be requested to solicit subscriptions, for the purpose of defraying the expenses of printing, publishing, and the obtaining of all necessary information for the furtherance of the enterprise.

DELEGATION MEETING.

Meeting of the delegates appointed by his excellency, the Governor of Louisiana, to attend the Memphis convention.

Mr. DeBow offered the following resolutions, which he defended at length, and which were carried after some debate:

Resolved, That the interests of Louisiana are deeply involved in the movements now in progress in regard to a connection, by railroad, between the Atlantic and Pacific oceans, and that, in the present state of information, the route by the Rio Gila and Paso del Norte, whatever its eastern terminus, will receive the support of the Louisiana delegation.

Resolved, That as many of us as are able will attend the sitting of the Memphis convention, on the 23d October, and trust that our absent colleagues will make the same effort.

Resolved, That all such delegates as may determine to attend, be requested to leave ther names, or send them by letter, to the office of M. M. Cohen, Esq., by the 15th October, and meet with us in New Orleans on or before that date, preparatory to our departure on the 17th.

Mr. Benjamin offered the following:

Resolved, That it be recommended to the members of this delegation to bring to the notice of the Memphis convention, the great advantages of establishing a communication across the isthmus of Tehuantepec, and to endeavor to secure the sanction and co-operation of the body in any enterprise for that purpose, which may be found practicable.

This was unanimously adopted.

10. RAILROAD CONVENTION AT ST. LOUIS.

We have only space now to present the resolutions adopted by this body on the 18th October last, but shall, before long, present the full proceedings, etc.

Resolved, That, in the opinion of this convention, it is the duty of the General Government to provide, at an early period, for the construction of a central national railroad from the valley of the Mississippi to the Pacific ocean.

Resolved, That, in the opinion of this convention, a grand trunk railroad, with branches to St. Louis, Memphis and Chicago, would be such a central and national one.

Resolved, That a committee be appointed to communicate to the convention to be held at Memphis, the foregoing resolutions, and to request the concurrence of said convention therein.

The following resolution was introduced by Mr. John Loughborough, of Missouri, and passed unanimously:

Resolved, That when this convention adjourns, it will adjourn to reassemble in the city of Philadelphia, on the first Monday in April next; that we hereby invite our brethren who will assemble at the city of Memphis on Monday next, to adopt a similar resolution, and that the committee upon an address to the people of the United States, be hereby instructed to appeal to every State, county, city and town, of the whole glorious confederacy, to send up a delegation to give expression to the will of the American people.

11. THE MEMPHIS CONVENTION.

In our next we hope to present full and interesting particulars in regard to this important convention. Neither space nor time admit of more than a brief reference:

RESOLUTIONS ADOPTED.

Resolved, That it is the opinion of this convention that it is the duty of the General Government to provide, at an early period, for the construction of a national railroad from the Mississippi river to the Pacific ocean.

Resolved, That to facilitate the accomplishment of this object, in the opinion of this convention, it is the duty of the General Government to constitute an efficient and competent corps of engineers to make complete explorations and surveys of all the routes that have been designated by public opinion, as proper for the line of this road.

Resolved, That after the proper surveys shall have been completed, that, in the opinion of this convention, it is the duty of the General Government to locate the line of the road; and, in making the location, *that* route should be selected which is easiest of access, best calculated to subserve the purposes of national defense, most convenient to the people of, and (as far as practicable) central to, the United States, and upon which a railroad can be constructed on the cheapest and best terms.

Resolved, That, to carry into effect the object of the first resolution, in the opinion of this convention, the public lands of the United States constitute a legitimate and proper fund.

Resolved, That, after the construction of the national railway trunk from the Mississippi river to the Pacific ocean, in the opinion of this convention, it is the duty of Congress to aid, by the appropriation of the national domain, in the construction of such branch railroads as will best connect it with the northern lakes and the great thoroughfares leading to the Atlantic ocean, and with such other points on the Mississippi river as will connect it with the lines of improvement completed or in the course of construction; and also to aid in the construction of branches from the main trunk to suitable points on the Gulf of Mexico, either east or west of the Mississippi river.

Resolved, That, in the opinion of this convention, it is the duty of the General Government to provide, under liberal conditions, for a connection between the main trunk of this national railroad and all railroads now made, or which may hereafter be constructed by the authority of the several States and territories of the Union.

Resolved, That as an important means, a necessary preliminary to the construction of a railroad, it is the first duty of Congress to take the necessary measures for the establishment of military posts from the western confines of our western States, along the southern boundaries of our republic and our Indian frontier, to the Pacific ocean; that these posts should be established in all proper places, not far distant from each other, and that civilized and productive settlements should be encouraged around them, by sales and the grant of pre-emption rights of the public lands to actual settlers, and by such other encouragement as may be deemed necessary, so that by these means ample opportunities may be afforded to our engineers for the immediate survey and reconnoissance of our possessions lying between our western and southern States and the Pacific ocean; and so, also, that by these means safe, practical roads, one or more, with facilities of travel, may be immediately formed for our citizens, and for the transportation of troops and munitions of war, etc., across our own territories, from the Atlantic to the Pacific shores, and in order that our government may fulfill its recent treaty stipulations with Mexico.

Resolved, That while the contemplated railroad across the continent is being constructed, a present communication between the States of this Union and the American and Asiatic coasts of the Pacific ocean, is of vast importance to every portion of this country; that such communication can be obtained by ship-canal or railroad across the isthmus of Tehuantepec, Nicaragua, or Panama, or across them all; which railroads or canals may be constructed by private enterprise; and this convention, in order to encourage the undertaking and completion of such works, recommend the passage of a law, by the Congress of the United States, directing the Postmaster General, Secretary of War and Secretary of the Navy, to make annual contracts for the transportation of the mails, troops and military and naval stores of the government, from the Atlantic to the Pacific posts of the country, by the shortest, speediest and cheapest route.

Resolved, That, in the event of the appropriation by Congress of a considerable portion of the public lands, or of the proceeds of the sales thereof, to the construction of a railroad from the Mississippi river to the Pacific ocean, that liberal appropriations of the public lands lying within the limits of the respective States, should be made to aid them in the construction of their works of internal improvement.

Resolved, That, in the present state of our knowledge, we feel warranted in recommending to the particular attention of the General Government for examination, as possessing special advantages, the route commencing at San Diego on the Pacific ocean, crossing the Colorado of the West, running along the Gila river, or near it, in a direction to the Paso del Norte, and thence across the State of Texas to its north-eastern boundary, between 32° and 33° of north latitude, terminating at some point on the Mississippi between the mouth of the Ohio river and the mouth of Red River.

Resolved, That a special committee of seven be oppointed by the President of the convention, to collect and publish information, to prepare a memorial to the Congress, and an address to the people, of the United States, upon the subject of increasing the facilities of intercourse between the Atlantic and Pacific oceans, and such other matters as shall be embraced in the resolutions of this convention.

Committee of seven, appointed by the president to memorialize Congress, &c.:

J. D. B. DeBow, of Louisiana.
Absolom Fowler, of Arkansas.
James C. Jones, of Tennessee.
J. R. Strother, of Missouri.
J. F. G. Mittag, of South Carolina.
C. C. Mills, of Texas.
G. S. Yerger, of Mississippi.

PROGRESS OF OUR COMMERCE AND COMMERCIAL CITIES.

1. TRADE STATISTICS OF CINCINNATI, 1849.

[Having, in the last number of the Review, furnished full statistical details of New Orleans, and in a previous number of St. Louis, we come now to the remaining great and growing city of the West, Cincinnati. There can be no higher authority for our facts and figures than the *Cincinnati Price Current, Commercial Intelligencer and Merchants' Transcript*.—Ed.]

WHEAT CROP OF WEST, 1849.

It has been ascertained, beyond a doubt, that the wheat crop of Ohio was extensively injured by the rust; and no person, well informed on the subject, estimates the present crop at over one-half an average yield: while some think it will not exceed one-third of a full average crop. The description of this year's production is, generally, very inferior; so that we lose greatly in *quality*, as well as in *quantity*. It has been supposed, by many, that this deficiency will necessarily enhance the value of flour; but there are many things connected with this trade, that will tend to keep prices in check; and, unless some unforeseen event should take place, prices can hardly rule higher than during the past year. While Indiana, Kentucky, and the western portions of Pennsylvania and Virginia have shared with us in the loss of their wheat crop, east of the mountains, in Pennsylvania, Virginia and Maryland, the crop is a full average one, and in New York, Michigan, and Upper Canada, it is better. The principal wheat-growing States, according to the estimates of the Commissioner of Patents, are as follows:

Ohio (barrels),	20,000,000	New York,	15,000,000
Pennsylvania,	15,000,000	Virginia,	12,000,000
Michigan,	10,000,000	Indiana,	7,000,000
Illinois,	5,000,000	Maryland,	5,000,000

Here we have eight States producing ninety million of bushels, one-half of which is supposed to be surplus. Supposing there is a deficiency in Ohio, Indiana, and Virginia, of twenty million of bushels, it reduces the surplus in the eight States to twenty-five million; but, taking into account the amount of old wheat on hand, and the increase in some of the States named, the probability is, that the deficiency is supplied. We must, also, take into consideration the fact, that England is likely to import largely from continental ports, during the coming season, and, with a good harvest herself, she will need *less* from the United States than we furnished during the past year. The conclusion, therefore, is, that prices will not rule high; and Ohio must, consequently, lose heavily by the failure of this important crop. This loss will, however, be, to a considerable extent, made up by an increase in the crop of corn; the yield of which, it is said, will be larger than ever before. Of this grain, we shall, doubtless, continue to ship, largely, to Europe; and the vast improvements in the manner of manufacturing it into meal, in this country, together with the failure of the wheat crop, for which it is a valuable substitute, will induce a greatly increased consumption at home. The crops of oats, barley, rye, and potatoes, are, we believe, generally good.

HOGS.

Our information in relation to the number of hogs that, in all probability, will be ready for the block, this season, warrants the belief, that in Ohio and Kentucky, and probably in Indiana and other western States, a very considerable increase will be shown. This fact, together with the result of last year's operations, the comparatively low prices now current for provisions, and the heavy stocks of pork and lard that go over to the next season. will keep prices in check; and the general opinion seems to be, that the market will open at between $2.50 and $3.00 per 100 weight. In order to show that there is nothing to induce dealers to pay anything over the prices named for hogs, we here give a statement, showing the relative value of the several products, to that of the hog. It was furnished by a gentleman who has had many years' experience in the packing business:

$3.00 ⅌ 100 weight, net for hogs, would be equal to—
  3½c. for green sides, 4¼ for bacon sides;
  4½ " " hams, 5.67 for bacon hams;
  2¼ " " shoulders, 3.03 for bacon shoulders;
  5¼ " lard; $5.50 for rump pork.
$3.50 ⅌ 100 weight net for hogs, would be equal to—
  4 for green sides, 5.03 for bacon hams;
  5 " " hams, 6.26 for bacon hams;
  3 " " shoulders, 3.91 for bacon shoulders;
  6¼ " lard; $6.50 for rump pork.

FOR MESS PORK.

Hogs cost $3.00—200 green sides, at 3½,	$7.00	
Cost of packing,	2.00	
		$9.00
Hogs cost $3.50—200 green sides at 4c.,	$8.00	
Cost of packing,	2.00	
		$10.00

From this it will be seen that the current prices for provisions would barely justify $3.00 for hogs; and if more is paid, it must be with a view to a future improvement in the value of the products.

LARD AND PROVISIONS.

We shall now bring this subject to a close by noticing, very briefly, a few facts connected with the imports and exports at this port. The deficiency in the exports of lard is very great—so much so, that the accuracy of our tables has been called into question. But, while we do not pretend to say that our figures are *strictly correct*, we believe they approximate very nearly to the truth. The deficiency in the receipts at New Orleans, to August 11, was only 69,469 kegs, being 229,418 kegs less than the falling off in the exports from this port. According to our statement, there must have been an increase in the shipments of lard from the Mississippi, Missouri, and Illinois rivers, &c., and we think this is very evident, from the fact that at New Orleans there is an increase, in the receipts of barrel pork, of 194,850 barrels, while the shipments from this port show a *deficiency* of 9,694 barrels. There must, therefore, have been an increase in the receipts, from other places in the West besides Cincinnati, of 204,544 barrels, and it is reasonable to suppose that in these places there was a proportionate increase in lard.

The deficiency of bulk meat, is accounted for by the large amount packed in boxes for the English market. There were received at New Orleans, up to August 11, 18,279 boxes, which is equal to 9,139,800 pounds.

The facts we have thus collated, show how rapidly the provision trade has been extended; the immense quantity the West is capable of, and likely to produce, and the importance of establishing a permanent market abroad, that the demand may be commensurate with the supplies.

No attempt has been made to ascertain the stock; of lard, it is believed not to be small, but of other descriptions it is light.

The following is a comparative monthly statement of steamboat arrivals and departures at this port for two years, ending September 1, 1849:

ARRIVALS FROM

	New Orleans.		*Pittsburg.*		*St. Louis.*		*Other Ports.*		*Total.*	
Month.	'47'8,	'48'9.	'47'8,	'48'9.	'47'8,	'48'9.	'47'8,	'48'9.	'47'8,	'48'9.
September,	5	12	79	72	25	19	220	168	329	271
October,	9		86	63	33	30	239	141	367	234
November,	30	22	65	95	27	32	238	155	362	304
December,	34	51	41	65	21	26	175	158	271	300
January,	40	53	42	47	8	7	213	158	303	255
February,	42	45	75	46	13	13	208	130	348	234
March,	47	36	93	87	20	21	246	152	406	308
April,	32	35	93	90	36	40	118	180	279	345
May,	28	22	79	51	36	41	200	182	343	296
June,	13	16	75	58	28	18	211	177	327	269
July,	31	19	76	24	27	15	205	130	339	188
August,	12	8	76	28	18	6	226	193	333	235
Total,	319	319	880	728	295	278	2499	1924	4007	3239

DEPARTURES FOR

	New Orleans.		*Pittsburg.*		*St. Louis.*		*Other Ports.*		*Total.*	
Month.	'47'8,	'48'9.	'47'8,	'48'9.	'47'8,	'48'9.	'47'8,	'48'9	'47'8,	'48'9.
September,	9	7	66	51	28	31	164	155	267	264
October,	22	13	72	68	43	30	102	110	238	221
November,	33	33	56	72	25	37	202	149	316	291
December,	27	57	33	57	10	24	154	139	224	277
January,	47	36	39	21	5	4	180	123	271	184
February,	46	35	51	46	16	15	187	122	300	218
March,	42	33	72	74	25	46	217	142	356	295
April,	27	22	91	90	46	54	196	157	360	323
May,	20	12	76	53	34	26	188	168	314	259
June,	24	14	62	38	29	26	182	162	297	240
July,	11	11	68	21	27	10	183	130	225	172
August,	9	8	76	21	26	10	204	181	315	220
Total,	297	281	762	612	309	313	2159	1738	3947	2944

STEAMBOATS BUILT AT CINCINNATI, 1848–9.

The following is a list of steamboats built at this port during the year ending September 1, 1849, as registered on the books of the Port Warden:

Name.	*Tonnage.*	*Value.*	*When Built.*
Lancaster,	135	$11.000	September, 1848.
New Orleans,	400	28.000	October, 1848
Hiram Powers,	316	22.000	" 1848
J. M. Niles,	430	28.000	" 1848
John Adams,	435	28,000	" 1848

Memphis,	265	18,000	October,	1848
Belvidere,	290	21,000	"	1848
Webster,	60	25,000	"	1848
Farmer,	293	19,000	"	1848
Storm,	290	20,000	December,	1848
Yorktown,	420	26,000	"	1848
Shamrock,	182	10,000	"	1848
Wm. Noble,	420	28,000	"	1848
Melodeon,	325	20,000	January,	1849
New World,	280	17,000	"	1849
Martha,	180	9,500	"	1849
D. B. Mosby,	190	12,000	February,	1849
Philip Pennywit,	320	24,000	"	1849
Sarah,	540	32,000	"	1849
Defiance,	500	35,000	March,	1849
Yankee,	315	23,000	April,	1849
Diana,	188	15,000	June,	1849
Jenny Lind, No. 2,	107	8,500	"	1849
Total 23	7,281	$480,000		

Comparing the number and tonnage of the boats built in this district during the last four years, ending September 1, the figures are as follows:

Year.	*Number.*	*Tonnage.*
1848-9	23	7,281
1847-8	29	10,233
1846-7	32	8,268
1845-6	25	5,657

IMPORTS AT CINCINNATI,

For three years, from September 1, to August 31, each year:

Articles.	'46'7.	'47'8.	'48'9.
Apples, green, barrels,	26,992	28,674	22,109
Beef,	186	659	348
Beef, tierces,	5	......	27
Bagging, pieces,	5,561	79,228	2,094
Barley, bushels,	79,394	165,528	87,460
Beans,	11,768	8,757	3,067
Butter, barrels,	6,345	6,625	7,721
Butter, firkins and kegs,	7,090	6,405	7,999
Blooms, tons,	2,017	2,203	9,519
Bran, &c., sacks,	14,594	1,941	21,995
Candles, boxes,	207	133	414
Corn, bushels,	896,258	361,315	344,910
Corn meal,	56,775	29,542	5,504
Cider, barrels,	3,261	2,289	4,346
Cheese, casks,	483	164	281
Cheese, boxes,	120,301	138,800	143,265
Cotton, bales,	12,528	13,476	9,058
Coffee, sacks,	59,337	80,242	74,961
Codfish, drums,	292	311	515
Cooperage, pieces,	186,186	179,946	147,352
Eggs, boxes and barrels,	561	4,035	4,504
Flour, barrels,	512,506	151,518	447,844
Feathers, sacks,	2,767	4,467	4,908
Fish, sund., barrels,	16,836	19,215	18,145
Fish, kegs and kits,	2,142	725	1,059
Fruits, dried, bushels,	82,871	27,464	38,317
Grease, barrels,	482	585	878
Glass, boxes,	18,002	20,231	33,898
Glassware, packages,	17,121	15,025	19,209
Hemp, bundles and bales,	26,678	15,349	11,161
Hides, loose,	24,376	33,745	23,766
Hides, green, lbs.,	7,513	10,829	22,774
Hay, bales,	7,049	8,036	12,751
Herring, boxes,	1,603	4,191	2,960
Hogs, head,	38,774	49,847	52,176
Hops, bales,	1,064	645	238
Iron and steel, pieces,	188,125	197,120	187,864
Iron and steel, bundles,	33,463	34,213	29,889
Iron and steel, tons,	1,685	827	1,768
Lead, pigs,	43,675	39,609	45,544
Lard, barrels,	21,991	37,978	28,514
Lard, kegs,	22,722	41,714	48,187
Leather, bundles,	5,069	6,579	6,975
Lemons, boxes,	2,185	3,068	4,181
Lime, barrels,	32,016	63,364	61,278
Liquors, hhds. & pps.,	8,369	3,115	4,476
Mdz. and sund., pkgs,	263,944	381,537	68,582
Merchandise, tons,	7,941	7,308	837
Molasses, barrels,	27,216	51,001	52,591
Malt, bushels,	12,562	7,999	29,910
Nails, kegs,	54,918	59,983	55,893
Oil,	5,663	6,618	7,427
Oranges, boxes & brls,	4,137	5,007	4,317
Oakum, bales,	1,100	1,486	1,428
Oats, bushels,	372,127	194,557	185,728
Oil cake, lbs.,	2,225,988	2,811,793	1,767,441
Pork & bacon, hhds.,	5,476	4,420	6,178
Pork & bacon, tcs.,	124	140	465
Pork & bacon, brls.,	40,581	69,828	44,267
Pork in bulk, lbs.,	8,027,399	9,643,063	9,249,380
Potatoes, barrels,	15,829	22,439	17,269
Pig metal, tons,	15,806	21,145	15,612
Pimento & Pep., bags,	3,180	3,455	1,257
Rye, bushels,	41,016	24,326	22,233
Resin, tar, &c., brls.,	5,004	11,668	3,298
Raisins, boxes,	11,990	22,796	14,927
Rope, twine, &c., pkg,	8,002	7,806	3,950
Rice, tierces,	1,145	2,494	3,365
Sugar, hogsheads,	16,649	27,153	22,685
Sugar, barrels,	7,196	11,175	7,575
Sugar, boxes,	5,177	2,928	1,847
Seed, flax, barrels,	25,753	32,260	22,859
Seed, grass,	4,964	4,968	5,920
Seed, hemp,	290	214	510
Salt, sacks,	56,292	65,265	76,985
Salt, barrels,	124,360	94,722	76,496
Shot, kegs,	1,118	809	818
Tea, packages,	5,443	2,931	7,412
Tobacco, hogsheads,	6,200	4,061	3,471
Tobacco, bales,	822	1,229	1,311
Tobacco, boxes & kgs,	9,241	14,815	12,468
Tallow, barrels,	1,748	2,472	1,829
Wines, brls. & ¼ cks.,	4,006	2,252	2,663
Wines, bkts. & bxs.,	1,419	2,272	2,101
Wheat, bushels,	590,809	570,818	385,388
Wool, bales,	2,690	1,943	1,686
Whisky, barrels,	184,639	170,436	165,419
Yarns, cotton, pkgs.,	9,721	6,403	5,562
Yarns, b.,	146,541	288,095	262,893

EXPORTS FROM CINCINNATI,

For three years, from September 1 to August 31, each year:

Articles.	'46'7.	'47'8.	'48'9.	*Articles.*	'46'7.	'47'8.	'48'9.
Apples, green, barrels,.	14,444	8,512	5,824	Lard, barrels,.........	49,878	81,679	37,521
Alcohol,..............	1,843	1,771	3,022	Lard, kegs,...........	150,828	208,606	130,509
Beef,.................	10,367	14.811	12,523	Lard oil, barrels,.....	6,190	8,277	9,550
Beef, tierces,..........	7,970	3,615	9,332	Linseed oil, barrels,..	6,032	3,878	3,020
Beans, barrels,........	3,782	1,097	1,685	Molasses, barrels,.....	9,046	18,332	17.750
Brooms, dozen,........	5,708	3,760	3,333	Oil cakes, tons,.......	5,246	4,397	2,274
Butter, barrels,........	1,348	2,937	1,272	Oats, sacks,...........	140,067	41,675	212
Butter, firkins & kegs,..	31,194	28,315	24,398	Potatoes, &c., barrels,.	34,130	15,687	7,073
Bran, &c., sacks,.......	3,842	3,761	233	Pork & bacon, hhds,..	31,538	37,162	39,470
Bagging, pieces,.......	8,867	12,632	15,910	Pork & bacon, tierces,	7,894	8,862	10.930
Corn, sacks,...........	258,198	53,021	7,176	Pork & bacon, barrels,	137,218	196,086	186,192
Corn meal, barrels,....	88,882	19,999	3,660	Pork in bulk, lbs.,...	3,478,856	759,088	924,256
Cheese, casks,.........	1,132	34	122	Rope, twine, &c., pkg.	8,723	5,506	4,369
Cheese, boxes,.........	70,104	59,379	55,134	Soap, boxes,...........	10,080	11,095	11,303
Candles,...............	16,622	29,180	39,640	Sheep, head,...........	726	1,400	522
Cattle, head,..........	872	733	97	Sugar, hogsheads,....	4.998	11,550	8,443
Cotton, bales,.........	5,019	6,123	4,009	Salt, barrels,..........	65,346	39,656	39,960
Coffee, sacks,..........	13,037	18,587	18,909	Salt, sacks,...........	4,413	5,557	5,403
Cooperage, pieces,......	41,121	36,924	55,617	Seed, flax, barrels,....	291	2.785	808
Eggs, barrels,.........	10,308	9,450	5,220	Sundry mdz., pkgs,...	234,957	341,363	210.049
Flour,.................	581,020	201,011	267,420	Sundry mdz., tons,...	18,179	16,849	21.466
Feathers, sacks,........	4.000	3,736	3,824	Sundry liquors, brls,.	719	9,364	10,913
Fruit, dried, bushels,..	16,077	5,074	8,317	Sundry manuf'rs, pcs.	22,251	42.418	94,934
Grease, barrels.........	694	4,268	6,922	Sundry produce, pkgs.	17,879	28,822	17.609
Grass seed,............	3,967	2,431	2,387	Starch, boxes,.........	5,826	8,179	7.904
Horses, head,.	2,026	1,268	378	Tallow, barrels,......	4,543	5,687	4,975
Hay, bales,............	327	94	1.040	Tobacco, kgs. & bxs.,..	9,718	9,352	7.497
Hemp,.................	8,733	5,659	2,198	Tobacco, hogsheads,...	6,011	3,812	3,309
Hides, lbs.,............	164,930	60,880	73,028	Tobacco, bales,.......	277	122	126
Hides, No.,............	12,444	9,024	7,731	Vinegar, barrels,.....	3,884	2.753	1.288
Iron, packs,............	68,905	127,192	43,025	Whisky,.............	183,928	186.509	136,911
Iron, bundles,.........	9,309	10,351	7,081	Wool, bales,..........	2,452	2,298	1.107
Iron, tons,............	5,646	6,976	6,270	Wool, lbs.,...........	36,710	7,037	10,230

NOTE.—The aggregate amount of exports given above, include all shipments by the river, canal, and railroad.

2. COMMERCE OF BOSTON.

We obtain from the Boston *Shipping List* the following comparative statement of the principal articles imported and exported from Boston for a number of years past. It will be seen that the imports of coal from Philadelphia this year have fallen off, while the receipts of flour from this port have more than doubled the supplies in 1847 and 1848:

IMPORT OF COAL.

	1847–8.	1848–9.
Philadelphia, tons,............	271,978	253,668
Other places, tons,............	18,877	20,197
Virginia, bushels,.............	69,225	26,400
English and Scotch, tons,......	5,506	7,798
Do. do. chald's, ...	450	1,406
Nova Scotia, chaldrons,........	49,529	38,333

IMPORT OF COFFEE, 1849.

	Bags.	*Piculs.*
Batavia, ...	49,075	2,667
Hayti, ...	54.476	....
Cuba, ...	1,012	....
Rio Janeiro,..................	31,419	....
Porto Rico,...................	925	....
Porto Cabello,................	8.154	....
Manilla, ...	2,468	....
Other foreign ports,, ...	4,650	....
Coastwise ports, ...	3.531	....
Total, 1848–9..................	155.710	2,667
1847–8..................	158.187	2,747
1846–7..................	220.057	10.700
1845–6..................	233,597	10,200

EXPORTS COFFEE.

	1846–7.	1847–8.	1848–9.
To foreign ports,........	25.930	36,675	46,409
Coastwise, ...	127,782	68,613	64,864

IMPORT OF COTTON FOR 1849.

New Orleans, bales,....................	111,390
Mobile,................................	43,678
Charleston,............................	25,896
Savannah,..............................	26,545
Apalachicola,..........................	31,138
Galveston,.............................	2,468
Other places,..........................	1,164
Total, 1848–9..........................	242,279
1847–8..........................	241,518
1846–7..........................	222.076
1845–6..........................	196,131

EXPORT OF FISH.

	1846–7.	1847–8.	1848–9.
Codfish, drums,........	4.162	2,030	4.645
Codfish, boxes,.........	1,655	4.051	5,100
Codfish, qtls.,..........	133.984	72,603	63,193
Mackerel, bbls.,........	82,919	87.017	103,828
Herring, boxes,........	32,049	36,653	25,913

IMPORT OF FRUIT.

	1846–7.	1847–8.	1848–9.
Lemons, boxes,.....	35.743	34.896	42,814
Oranges, do.	61.496	62,547	75,332
Figs, drums,.......	209,869	306,771	115,341
Figs, cases, ...	340	485	971
Raisins, casks,.....	26,074	17,631	25,496½

Raisins, drums,....	4,368	1,729	1,100
Raisins, boxes, ...	142,866	156,953	152,076½

IMPORT FLOUR FOR TWO YEARS ENDING AUGUST 31.

	1847–8.	1848–9.
New York, bbls.,............	196,686	100,166
Albany,....................	65,299	76,849
Western Railroad,..........	387,803	293,760
New Orleans,...............	195,250½	323,318
Fredericksburg, ...	23,183	41,252
Georgetown,................	3,808	18,361
Alexandria, ...	15,847½	18,375
Richmond,..................	16,836	70,893
Other ports in Virginia,.....	4,021	550
Philadelphia,..............	11,917	81,592
Baltimore, ...	24,687	53,236
Other places, ...	1,395	5,416
Total,..........	945,643	1,033,768
1846–7,....................		842,523
1845–6,....................		847,753

The exports have been—

To foreign ports, bbls.,......	132,765
Coastwise, ...	17,089
Total, 1848–9	149,854
1847–8	143,947
1846–7	177,610
1845–6	152,908

IMPORT OF CORN FOR THE YEAR ENDING AUGUST 31, 1849.

	Bushels.	*Sacks.*
New Orleans, ...	....	69,662
Ports in Virginia, ...	1,054,183	......
Maryland,.......	861,067	......
Pennsylvania,...	452,738	......
Delaware,.......	125,396	......
New Jersey,.....	21,890	......
N. York & W. RR.	394,307	......
Other places, ...	9,638	......
Total, 1848–9	2,919,219	69,662
1847–8	2,208,144	268,878
1846–7	1,910,546	144,724
1845–6	2,197,255	....

RECEIPTS OF OATS, RYE, WHEAT AND SHORTS.

	1846–7.	1847–8.	1848–9.
Oats, bushels,........	562,804	441,526	379,531
Rye, bushels, ...	63,758	49,301	51,648
Shorts, bushels,......	82,427	48,292	70,675
Wheat, bushels,......	140,754	282,474	416,010

The export of corn has been—

1848–9, bushels,......................	569,834
1847–8, ...	441,526
1846–7, ...	594,195
1845–6, ...	98,118

IMPORT OF HEMP FOR THE YEAR ENDING AUGUST 31, 1849.

From	*Tons.*	*Bales.*
Russia, ...	1,205	......
Manilla, ...	....	29,695
New Orleans and other places,.	196	10,067
1848–9,......................	1,401	39,762
1847–8,......................	1,150	49,621
1846–7,......................	506	41,206
1845–6,......................	181	33,247

IMPORT OF HIDES FOR THE YEAR ENDING AUGUST 31, 1849.

Buenos Ayres, Rio Grande and Montevideo, ...	297,006
California, ...	29,800
Valparaiso and Central America,......	25,452
Rio Janeiro, ...	37,671
Bahia,................................	19,942
Other foreign ports, ...	58,104
Coastwise ports,......................	92,375
1848–9, ...	560,352
1847–8, ...	535,782
1846–7, ...	382,849
1845–6, ...	406,240

The number of bales have been—

1848–9, ...	3,700
1847–8, ...	3,799
1846–7, ...	1,959

IMPORT OF LEAD.

1848–9, pigs, ...	153,151
1847–8, ...	156,048
1846–7, ...	131,793
1845–6, ...	155,872
1844–5, ...	135,147

IMPORT OF MOLASSES FOR THE YEAR ENDING AUG. 31, 1849.

From	*Hhds..*	*Tcs.*	*Bbls.*
Foreign ports,............	59,584	3,585	1,429
Coastwise ports,..........	11,673	153	2,691
1848–9,..................	71,257	3,738	4,120
1847–8,..................	76,694	4,598	7,101
1846–7,..................	79,537	4,499	1,571
1845–6,..................	70,584	3,836	3,129

The exports have been—

To	*Hhds.*	*Tcs.*	*Bbls.*
Foreign ports,............	2,850	220	74
Coastwise ports,..........	9,986	432	319
1848–9,..................	12,836	652	·393
1847–8,..................	15,216	756	534
1846–7,..................	23,882	3,016	301
1845–6,..................	15,223	1,762	284

IMPORT NAVAL STORES FOR YEAR ENDING AUGUST 31.

	1846-7.	1847-8.	1848-9.
Resin, bbls., ...	11,674	8,999	20,437
Turpentine,............	38,720	44,680	28,665
Spirits Turpentine,.....	7,218	6,372	9,980
Pitch,.................	2,276	1,005	2,181
Tar, ...	13,848	19,742	22,752

IMPORT PROVISIONS FOR YEARS ENDING AUGUST 31.

	1847–8.	1848–9.
Beef, bbls.,....................	27,560	31,898
Pork, bbls.,....................	100,344	110,317
Hams, casks and tcs., ...	8,766	12.945
Hams, bbls.,..................	5,384	5,485
Lard, bbls.,..................	49,902	58,409
Lard, kegs,...................	53,432	55,634

The export for the same time has been—

	1847–8.	1848–9.
Pork, bbls., foreign,..........	23,609	22,228
Coastwise, ...	7,361	10,088
Beef, bbls., foreign,..........	8,391	5,693
Coastwise,.............	818	2,597
Lard, bbls., foreign,..........	13,820	4,074
Coastwise,.............	2,430	1,607
Lard, kegs, foreign,..........	43,709	24,667
Coastwise,.............	5,103	2,338

IMPORT OF RICE HAS BEEN AS FOLLOWS:

1848–9, casks,........................	15,432
1847–8, ...	11,777

1846–7, casks,	8,572
1845–6,	12,083

IMPORT OF SALT AS FOLLOWS:

From	1847–8.	1848–9.
Liverpool, tons,	4,046½	6,637½
Liverpool, sacks,	68,039	92,413
Cadiz, lasts,	5,075½	4,511½
Cadiz, tons,	......	900
Curacao, bbls.,	23,549	....
Trapani and Ivica, tons,	600	1,773
St. Martins, bush.,	......	200,954
Bonaire, bbls.,	39,781	19,120
Turks Island, bush.,	350,491	120,869
St. Ubes, moys,	378	787
Other places, bush.,	91,895	81,495

IMPORT OF SALTPETRE FOR YEARS ENDING AUG. 31.

1848–9, bags,	69,177
1847–8,	66,289
1846–7,	68,012
1845–6,	41,960

IMPORT SUGAR FOR THE YEARS ENDING AUGUST 31.

	1847–8.	1848–9.
Foreign ports, boxes,	61,918	54,405
Domestic, do.	9,872	3,658
Foreign ports, hhds.,	9,338	8,017
Domestic, do.	3,737	2,533
Foreign ports, bags,	75,171	59,213
Domestic, do.	1,166	1,011
Foreign ports, bbls.,	993	1,102
Domestic, do.	4,718	14,150
Foreign ports, baskets,	700	890

3. CHARLESTON AND SAVANNAH.

[The rivalries of these two interesting southern cities, keep up a continual cross fire between them which at times becomes very warm. A quarantine upon Savannah vessels, because cholera was thought to exist somewhere on the neighboring plantations, was likely to lead to the just recrimination of Savannah, when yellow fever the past summer paid his respects once again to the Charlestonians.

These two cities are now contending might and main for the trade of North Alabama, Georgia and Tennessee, and press their railroad enterprises with great vigor. If they will but keep cool, the progress of either in the next ten years will rival the most favored cities of the North. We hail with unfeigned joy these evidences of southern advancement.

The annexed is taken from a late number of the Charleston Mercury, and if Savannah has any thing to say to it—let her speak.—ED.]

"We will now examine the proof offered by 'Savannah' of his second proposition, that the *advantage* in selling cotton in Savannah is $1 50 per bale *better* to the planter *than* Charleston. This is not very clearly expressed, but the meaning of it may be conjectured; and here is the proof, according to 'Savannah:'

SALE OF ONE BALE OF COTTON IN CHARLESTON.

1 bale, 450 lbs. 9½c.		$42 75	
Expenses:			
Freight from Augusta 25c. per 100 lbs.	$1 12		
Drayage, Charleston,	12		
Storage two weeks	16		
Extra sampling, 10 lbs. per bale	95?		
Commissions, 2½ per cent.	1 17–	$3 52	
			$39 23
Sale in Savannah, 450 lbs. 9½c.		$42 75	
Freight from Augusta 12½c. per 100 lbs.	56		
Wharfage	05		
Storage two weeks	10		
Extra sampling	00		
Commissions	50–	$1 21	$41 54
Difference in favor of Savannah			$2 31

"The disingenuousness of this statement (to use a very mild term) will be apparent at the most superficial glance. In the Charleston sale the freight is put down at $1 12, when it is a matter of common notoriety all over the two States, that it is but fifty cents per bale! and ninety-five cents, or the value of ten pounds of cotton, is charged for extra sampling, when not one ounce is lost to the planter, since his cotton is always weighed before it is sampled; and if it were not, the loss would be but one quarter of a pound less, no doubt, than is sustained in Savannah. Such statements scarcely merit the courtesy of a serious refutation. While these figments are inserted on one side of the account, there is left out of it on the other, the important item of the superior price which cotton always commands in Charleston, and, in the nature of things, always must command. For this we are indebted to a number of causes. Our larger capital, which enables us to hold a large stock with ease, and prevents undue sacrifices. The superior salubrity of the climate, which enables strangers to remain here all the year, and distributes the cotton business throughout the twelve months instead of crowding it into *seven*. The advantage of geographical position; Charleston occupying a peninsula jutting out into a spacious bay, within an hour's sail of the Atlantic ocean, and receiving and loading *at the wharves* entire cargoes of three and four thousands bales of cotton; while Savannah is eighteen miles from the sea, on the bank of a fresh water river, where ships of magnitude cannot load. The greatest number and larger dimensions of our coasting ships, and consequent lower rates of freight, both foreign and coastwise, that result from these several causes. The large number of our merchants, so that we are rarely with fewer than fifteen or twenty competitors for cotton, even in the middle of summer; while in Savannah, we have heard their factors say, they are often dependent on the liberality of a *single house* for the price that they shall get for their cotton. Under all these circumstances, it is not to be wondered at that cotton invariably commands a higher price in Charleston than in Savannah. Hundreds of cases can be cited of parcels bought in Savannah on speculation, sent here for sale, and commanding in this market from ¼ to ⅔c. per lb. profit. Thousands of bales are sent here for sale from time to time and *not one bale* is ever sent from Charleston to Savannah. Let us now try the statement of 'Savannah,' purged of its obvious inaccuracies, and allow the moderate difference of ⅛ only for the superiority of the Charleston market.

CHARLESTON SALE.

1 bale 450 lbs. at 9⅝c.		$43 31	
Weighing	$0 06		
Freight from Augusta per railroad	0 50		
Drayage	0 12		
Insurance	0 00		
Storage, two weeks	0 16		
Commission, 2½ per cent	1 08-	$1 92	
Net proceeds			$41 39

SAVANNAH.

450 lbs. at 9½c.		$42 75	
Charges:			
Wharfage	$0 05		
Freight from Augusta at ⅛c.	0 56		
Insurance per river ¼ per cent.	0 11		
Storage	0 10		
Commission	0 50-	$1 32-	$41 43
Excess in favor of Savannah			$0 04

"This is the most flattering statement that can be made for Savannah; but if we vary the data a little the result may be quite different. Let us take, for example, a bale of Hamburg cotton, of the average weight of 350 lbs., and sell it at the low prices of the past season, thus:

350 lbs. at 6⅛c.		$21 44	
Charges:			
Weighing	$0 06		
Freight from Hamburg	50		
Insurance	00		
Drayage	12		
Storage	16		
Commission 2⅛ per cent	54-	$1 38-	$20 06

SAVANNAH SALE.

350 lbs. at 6c.		$21 00	
Charges:			
Wharfage	$0 05		
Freight, ⅛c.	44		
Insurance, ¼ per cent.	05		
Storage	10		
Commission	50-	$1 14-	$19 86
Difference in favor of Charleston			$0 20"

4. INTERESTING TO MARINERS.

A United States vessel has been dispatched to the coast of South America, to test the correctness of Lt. Maury's wind and current charts, which have been drawn in accordance with a theory of his own, that is based upon the reports of navigators upon that coast.

It is alleged that along South America, vessels which sail close in shore have the benefit of a strong westerly breeze, by taking advantage of which they are enabled to shorten the distance at least one thousand miles. It is customary in our commercial marine to take the north-east trade winds, which carry the vessel near the Cape de Verde Islands, where the south-east trade winds are met.

By these latter they are enabled to proceed to Rio de Janeiro, whence they pursue their voyage in a direct line to the Horn. The route by the Cape de Verdes is an obtuse angle, and if the theory of Lieut. Maury is correct, vessels may sail in a *direct* line to Rio. The question to be tested is a most important one.

5. LIABILITY OF COMMON CARRIERS.

COURT OF COMMON PLEAS, NEW-YORK.—JUDGE ULSHOEFFER, PRESIDING.

The Mercantile Mutual Insurance Company *vs.* Chase and others.—This was an action to recover from defendants, as common carriers, the value of goods belonging to different persons, which were destroyed or damaged by the great fire in Albany, in August, 1848. The owners of the goods had insured them with the plaintiffs, who paid the insured value of their goods to the amount of four thousand four hundred and forty dollars, and now sought to recover the amount so paid from the defendants, who constitute a company called the Great Western Transportation Company, and who undertook to forward or transport the goods. For the defense it was contended that the plaintiffs had no right to bring this action, as they had been paid for insuring the property, and were bound to bear the loss. It was also contended that the defendants were not common carriers, but only forwarding agents, and that the goods in question were shipped on board boats belonging to others. And that if even they could be considered as common carriers, they were not liable in the present instance, as they had limited their liability by making special agreement with the owners of the goods, by which they were, in certain cases to take the risk upon themselves, one of which was where goods were destroyed by fire; and, also, that, in the present instance, the fire had been rendered so utterly unmanageable by a tempest, that the destruction of the goods might be set down as the "act of God," for which even common carriers were not liable.

The judge charged the jury, That he would reserve for further consideration the law points of the case; but that for the purpose of the trial, he held that the plaintiffs had a right to bring the present action, and that the defendants were liable as common carriers, and in their receipts they undertook to convey the goods to their destination. As to the special agreement which the defendants made, not to be liable for loss of goods, under certain circumstances, his present impression was, that such an agreement could not overrule the law in relation to common carriers, the policy of which was to hold them to the strictest accountability. As to the fire having been rendered more destructive by a tempest occurring at the same time, he did not think that circumstance could alter the case as respected the liability of the parties.

The jury found a verdict for plaintiffs of four thousand seven hundred and sixty-four dollars.

AGRICULTURAL DEPARTMENT.

1. PRODUCTION OF TURPENTINE IN ALABAMA.

[The following letter appears in the Mobile "Planter." The writer will make 150 bbls. turpentine this year. He distills six bbls. crude per day. The article is equal to the very best.—Ed.]

"I herewith comply with your request, and give you such information as I think would be of interest to those who design engaging in the turpentine business. Select about 200 acres of land to the hand, where it is well timbered with pitch pine—it should be as level as possible. Commence cutting boxes about the first of November, and be careful to have them all of one size—say to hold about a quart. You may cut from 1 to 3 boxes in a tree, according to the size of your trees. A hand can cut from 50 to 100 boxes per day—but a green hand could not average more than 60 or 65 per day. You may continue cutting boxes till the sap begins to rise, which is generally about the first or middle of March. You will then divide your boxes—8000 to the hand—and proceed in guaging your trees, which is done with the common broad ax. Here you ought to be very particular that you get your guage deep and the face wide enough. The guage ought to be about 1½ inches deep, and the face 18 or 20 inches wide. One hand ought to guage 300 boxes per day. After you are done guaging, which will be about the first of April, your boxes will then be full and ready for dipping, unless there has been a very severe winter. After the first dipping, you should commence round shaving, and round shave once a week until the boxes have again filled, which will be about four weeks, provided you have good trees and an ordinary season. One hand, after becoming acquainted with the business, ought to shave 1500 boxes per day. If the work is well done, you ought to get 40 or 45 barrels at a dipping ; one hand can dip six barrels per day.

The season is for eight months, and in that time you will get six dippings, which will yield, at a safe calculation, 200 barrels to the hand.

If you wish to distill the crude turpentine, you ought to have your still up by the first of April, and distill as fast as you gather it, as it will yield more spirits and make better resin. The still should be located on some stream where water could be conveyed to the condensing tube without carrying by hand. The barrels for the spirits should be of the best quality, made of well seasoned white oak, iron hooped, and well glued inside with three coats of glue. They will cost, on an average, $1.75 per barrel. The crude turpentine will yield from 6 to 8 gallons spirits per barrel, owing to how soon it is distilled, its cleanness, and a sufficiency of cold water. The general calculation is 5 gallons crude to 1 of spirits. Below, I give you a statement of expenses and net proceeds for 3 years, with 15 hands the first year.

FIRST YEAR'S EXPENSES.

3000 acres of land, @ $1.25 $3,750.		500 spirits barrels, at $1.75, ...	$875
Interest of $3,750 at 8 per cent., ...	$300	Freight, commission, wharfage and drayage on 500 barrels, ...	500
Provision and clothing for 15 hands, ...	450	1800 resin barrels at 25 cents, ...	450
Hire of 4 extra hands, 4 months, cutting boxes, ...	160	Shipping, commission, &c., ...	550
One team, $600, one dray horse, $150, extra horse, $100. The interest of which, and wear and tear, will be, ...	143	Total.	5,393
Food for 6 horses, ...	300	Proceeds of 500 bbls. spirits, 40 gallons to the barrel:	
Hire of wagon and drayman, with food and clothing, ...	300	20,000 gallons spirits at 40 cents per gallon, ...	8,000
Overseer, ...	300	1800 bbls. resin, averaging $1.25 per bbl.,	2,250
Still, $2000, interest and wear and tear,	250		
Distiller, ...	600		10,250
One hand for 6 months at the still, ...	75	Deduct, ...	5,393
Wear and tear of tools, ...	40		
400 crude turpentine barrels, at 25 cents,	100	And you have a balance of.	4,857

I have only calculated 25 cents for the resin and crude turpentine barrels, which is just the price for making. The wagoner and drayman can get all the staves from the first of November to the first of April. You perceive that you have a net gain of $4,857 for the first year, for 15 hands ; now let us see what you can do the next year ; 12 hands will be sufficient to tend the boxes that are now cut. We will say that you commence cutting boxes again the first of November. The 12 hands will cut enough, by the first of March, to employ 9 men. The 12 hands which work in the old boxes will make 300 barrels to the hand, and the other 12 will make 200 each—you will, therefore, make 6,000 barrels the second year.

SECOND YEAR'S EXPENSES.

5400 acres of land @ $1.25, $6,750.		Two wagoners and one drayman, the wages, food and clothing, ...	$450
Interest on $6,750, at 8 per cent., ...	$540	Two overseers, ...	600
Food and clothing for 24 hands, ...	750	Wear and tear of still, ...	250
Interest and wear and tear of teams and horses, ...	200	One distiller, ...	750
Food for horses, ...	400	One hand at the still, ...	120

Wear and tear of tools,	$75	Proceeds of 1000 barrels spirits, 40 gallons to the barrel:	
4000 pitch, resin and turpentine barrels, at 30 cents,	1,200	40,000 gallons at 40 cents,	16,000
1000 spirits bbls. at $1.75 per bbl.,	1,750	3600 barrels pitch and resin at $1.25,	4,500
Freight, commission, wharfage, drayage, &c., on 1000 barrels spirits,	1,000		20,500
Shipping, commission, &c., on 3600 bbls. pitch and resin,	1,100	Deduct.	9,195
Total,	9,195	And you have a balance and net gain of	11,305

We will now make a calculation for the third year. Twenty-two hands will be sufficient to work the boxes that you have now cut. You will again commence cutting the first of November, and by the first of March you will have cut enough to employ 16 more hands. Now, the 22 hands which work in the old boxes will make 300 barrels each, and the other 16 will make 200 each—you will, therefore, make the third year 9,800 barrels.

THIRD YEAR'S EXPENSES.

9000 acres of land @ $1.25, $11,250.		Freight, commission, &c., on 1640 barrels spirits,	$1,640
Interest on $11,250, at 8 per cent.,	$900	Shipping, commission, &c., on 5800 pitch and resin barrels,	2,000
Food and clothing for 38 hands,	1,150	Total,	14,470
Interest and wear and tear of teams, horses, &c.,	300	Proceeds:	
Food for horses,	550	1640 barrels spirits, 65,600 gallons at 40 cents per gallon,	26,240
2 wagoners and 2 draymen, wages, food and clothing,	600	5800 barrels pitch and resin, at $1.25,	7,200
3 overseers,	900		33,440
Wear and tear of still,	250	Deduct,	14,470
2 distillers,	1,000	And you have a net gain of, for 38 hands,	18,970
2 hands at the still,	260		
Wear and tear of tools,	100		
6500 pitch, resin and turpentine barrels, at 30 cents,	1,950		
1640 spirits barrels, at $1.75,	2,870		

I have calculated that you have your still located not more than 10 or 12 miles from the river, so that you can make one load a day with your teams. Now you have arrived at the end of the third year, and it appears that you have made, the first year, $4,857, an average to the hand of $324, which is equal to cotton at 16 cents. The second year you made $11,305, an average to the hand of $471, which is equal to cotton at 23½ cents. The third year you made $18,970, an average to the hand of $499, which is equal to cotton at 25 cents per pound.

Any further information which I could give upon the subject would be communicated with pleasure.

Respectfully, your ob't servant,
C. Kroft.

2. THE STEAM PLOW.

[The following letter discloses the important fact, that a mechanic of Louisiana is about to bring into operation this great desideratum, upon such a system as must secure its complete triumph. The inventor called upon us, but we regret being absent at the time. We understand his great enterprise has been assisted in its infancy by our honored fellow-citizen, Maunsel White, Esq., who is ever foremost in every laudable work. We await, with anxiety, the result of this movement. In Vol. V, of the Commercial Review, the reader will find some interesting remarks of J. P. Benjamin, Esq., upon the steam plow as attempted in Europe.—Ed.]

New River, Louisiana, August 2, 1849.

Dear Sir—I had some correspondence with you, some time since, about the advantages of a steam plow in this level country, and I am now happy to inform you we are about to have one in operation, in a few weeks, invented by Mr. Henry Cowing, and I believe patented. It is, I think, to be called the "Steam Plow, Land Locomotive, and Machine of all Work;" and not an inappropriate name either. It is to extract stumps, cut ditches, break up land (fifty acres a day), lay off the ground, plant, cultivate, lay by, cut, and haul to mill the cane. I have seen a model, and it will answer, if sufficient power can be obtained without too much weight. Imagine to yourself a velocipede on wheels sixteen feet high, and eighteen feet apart, with a governing wheel eight feet high; on the inner rim of the large wheels a cog wheel; on a platform built on the axle of the large wheels, and supported by the governing wheel, a locomotive; across the platform, a shaft with a pinion-wheel on each end, working in the cog-wheels, and worked by the locomotive; and you have the machine, as simple as may be. The inventor thinks he gains power, without losing speed, by this arrangement of the machinery. If so, the thing is done. There will be three frames for plows, each to contain five plows, attached by iron rods to the axle-tree of the large wheels. The breaking up of plows will be so arranged as to follow each other, cutting only six inches with one plow, but yet cutting, in all, twenty-four inches deep. In this way the ground will be much more thoroughly pulverized than if a furrow-slice, twenty-four inches thick, was cut with one plow. When you get to the end of the field, by a very simple arrangement, the plows will unset, eight or ten feet off the ground, and, by throwing one wheel out of gear, and going ahead on the other, the machine will turn short round, the plow passing over the top of the fence. On a smooth firm road it will travel at the rate of twenty-five miles an hour. But, as your friend of the Union says, "*nous verrons*."

Respectfully, W. J. MINOR.

3. CULTIVATION OF THE TEA PLANT.

GREENVILLE, SOUTH CAROLINA, August 23, 1849.

You must remember Mr. Junius Smith. He was originally from Litchfield, Connecticut, a student of Yale College, a merchant of New York, but the greater portion of his life a resident of London. Several years were devoted by him to the great subject of Atlantic steam navigation. Having demonstrated that this could be accomplished by the passage of the Sirius, he continued the agent of that line until the loss of the President, when the company wound up their concerns, with an immense loss to himself. Mr. Smith was obliged to turn his attention to some other occupation. His exertions were mainly instrumental in getting a bill through Congress, empowering the Postmaster General to make contracts for carrying the mail; but instead of giving the contract for the Atlantic mail to Mr. Smith, he gave it to Mr. Mills of your city.

Mr. Smith had but one child, who married the Rev. Mr. Maddock, a clergyman of the English church, who was afterward appointed by the East India Company, a chaplain, and removed with his wife to a station in the Himalaya mountains, where the company have large tea plantations. Some three years ago, this daughter wrote a letter to her father, calling his attention to the subject of tea, and recommending its introduction into the United States. The old venerable was struck with the idea; and, after giving the subject the most attentive examination, became convinced that it was practicable, and, in the 69th year of his age, took the matter in hand with the greatest earnestness. He found that the soil, climate, and latitude of several of the States of this Union, by comparison with the great tea districts of China, were adapted to its cultivation, for the tea plant flourishes in its greatest strength between the 20th and 40th degree of latitude, and that, contrary to popular opinion, is proof against severe frosts, snow storms, and all the stern severities of winter. After making a very extended examination in different States, he selected, as the best spot he could find for the experiment, this region. His tea garden is about three-fourths of a mile from this village. In the fall of 1848, about 500 plants were received from China, via London, and in December they were planted in his garden. A considerable quantity of tea seed was planted at the same time.

I now proceed to give you the result. Every one knows what a tremendously severe winter and spring were the last. The plants were left to take care of themselves; and yet, the larger portion of them are unharmed, and are now in a flourishing condition. I saw several specimens of the green and black plant in bud. The experiment has succeeded beyond a doubt. Mr. Smith has only to follow it up, and increase his stock by new plants, cuttings, and seed. It is of slow growth. Like the oak, the tea plant buds one year, but does not fruit till the next. Next year, I presume, Mr. Smith will begin to pick tea, although his great object, for some time to come, will be to increase the quantity of his plants. The tea seed was planted at a wrong season, and did not amount to anything. He is daily expecting an increased number and assortment of plants, and more seed; the latter, if planted at the right season (in the spring), will succeed, I think. Mr. Smith has a garden superior to anything about here. It contains only an acre of ground. He has erected a snug little cottage in one corner of it, where he is as happy, contented, and confident of success, as man can be. Having satisfied himself, by actual experiment, that his theory was correct, he has prepared to increase his operations, by purchasing about three hundred acres of suitable land, on the Saluda river, nine miles from the village, where his future operations will be on an increased scale. But his tea garden and plantation do not occupy the whole attention of Mr. Smith. He is an agriculturist and horticulturist by experience. He has introduced into this section, and brought to perfection, the finest of foreign fruits. I noticed a large number of fig trees, almond trees, dates, and grapes, which he has procured from Europe, and which will, undoubtedly, flourish here as well as there. I have been daily in the habit of eating fresh figs as good as any I ever met with in Europe and I see no reason why they should not be cultivated and prepared for the northern market, to an extent that shall supercede the necessity of their importation from abroad. The same remarks will apply to dates and almonds. It is really refreshing to see an intelligent old man, who has passed his three score and ten, devoting the remainder of his life to successfully accomplish an object which can never benefit him personally. I have no doubt in my mind, that the introduction of the tea plant into this country will prove of vast and incalculable benefit to the Union. It has been attended with great expense, all of which has been borne by the old gentleman himself. With his own resources, he has published a work on the cultivation of the tea plant, written by himself, and which his actual experiments have partially demonstrated to be true. Mr. Smith estimates the annual consumption of tea in the United States, at eleven million of pounds, in Europe, fifty; total sixty-one millions.

He estimates the productions in China to be over nine hundred millions of pounds, of which the Chinese export only about seventy million. He supposes that an acre of land will produce five hundred and forty-seven pounds; consequently the cultivation of 20,109 acres of land in the fourteen tea-growing States, will supply the present consumption of the United States. To supply Europe would require 91,411 acres of land. He supposes that there are fourteen of our States that would grow tea, and that 111,520 acres of land, cultivated as tea plantations, averaging 7,965 for each of the fourteen States, will supply the consumption of the article both for Europe and the United States. It may be some years before tea plantations become general, but that they will eventually be found in this region, I do not doubt. Mr. Smith deserves a great share of credit for his bold undertaking. More than that: this State, that he has honored by selecting for his first experiment, and to which it will prove of great benefit, ought to encourage and sustain the old gentleman, and give him the means to extend his operations to an extent that will prove of immediate benefit to the State and the country at large.—*N. Y. Herald.*

4. COTTON CROP OF THE UNITED STATES, 1849.

STATEMENT AND TOTAL AMOUNT FOR THE YEAR ENDING AUGUST 31, 1849.

	Bales.	*Total.*	1848.
NEW ORLEANS—Export—Foreign, [illegible]; coastwise, [illegible]; stock 1st September, 1849, [illegible]	1,182,783		
Deduct—Stock 1st September, 1848, [illegible]; received from Mobile, 35,104; Florida, [illegible]; Texas, [illegible]	88,986		
		1,093,797	1,190,733
MOBILE—Export—Foreign, [illegible]; coastwise, [illegible]; burnt at Mobile, 400; stock 1st September, 1849, [illegible]	542,877		
Deduct—Stock 1st September, 1848, 23,584; received from New Orleans, 587	24,171		
		518,706	436,336
FLORIDA—Export—Foreign, [illegible]; coastwise, [illegible]; stock 1st September, 1849, 615	200,693		
Deduct—Stock 1st September, 1848	507		
		200,186	153,776
TEXAS—Export—Foreign, [illegible]; coastwise, [illegible]; stock 1st September, 1849, 452	39,574		
Deduct—Stock 1st September, 1848	747		
		38,827	39,742
GEORGIA—Export from Savannah—Foreign—Uplands, [illegible]; sea islands, [illegible]; coastwise—Uplands, [illegible]; Sea islands, [illegible]; from Darien—New York, none; stock in Savannah 1st September, 1849, [illegible]; stock in Augusta and Hamburg 1st September, 1849, 12,819	430,775		
Deduct—Stock in Savannah and Augusta 1st September, 1848, 36,606; received from Florida, [illegible]	39,403		
		391,372	254,825

South Carolina—Export from Charleston—Foreign—Uplands, 280,671; Sea islands, 18,111; coastwise—Uplands, 168,356; Sea islands, 813; burnt at Charleston, 150; from Georgetown—New York and Boston, 3,255; stock in Charleston 1st September, 1849, 23,806	490,192		
Deduct—Stock in Charleston 1st September, 1848, 14,085; received from Savannah, 17,990	32,075		
		458,117	261,752
North Carolina—Export—Coastwise		10,041	1,518
Virginia—Export—Foreign, 1,406; coastwise and manufactured (taken from the ports), 14,838; stock 1st September, 1849, 1,750	17,994		
Deduct—Stock 1st September, 1848	444		
		17,550	8,952
Total crop of the United States,		2,728,596	2,347,634

Total crop of 1849, as above,	bales	2,728,596
Crop of last year,		2,347,634
Crop of the year before,		1,778,651
Increase over last year,	bales	380,962
Increase over year before,		949,945

EXPORTS TO FOREIGN PORTS FROM SEPTEMBER 1, 1848, TO AUGUST 31, 1849.

From	*To G. Britain.*	*To France.*	*To N. of Europe.*	*Other F'n ports.*	*Total.*
New Orleans, bales,	645,018	154,647	61,062	100,705	961,492
Mobile,	290,383	61,597	16,822	27,539	396,341
Florida,	62,734	5,721	6,836	4,448	79,739
Texas,	......	750	1,745	......	2,495
Georgia,	195,443	18,458	3,764	......	217,665
South Carolina,	206,109	48,768	26,242	17,663	298,782
North Carolina,	......	......	......	......	......
Virginia,	242	108	1,056	......	1,406
Baltimore,	106	......	......	......	106
Philadelphia,	2,819	......	......	484	3,303
New York,	132,612	78,037	44,593	5,101	260,343
Boston,	2,435	173	3,038	226	5,872
Grand Total,	1,537,901	368,259	165,458	156,226	2,227,844
Total last year,	1,324,265	279,172	120,348	134,476	1,858,261
Increase,	213,636	89,087	45,110	21,750	369,583

GROWTH.

	Bales.		*Bales.*
Total crop of 1823–4,	509,158	Total crop of 1836–7,	1,422,930
" " 1824–5,	569,249	" " 1837–8,	1,801,497
" " 1825–6,	720,027	" " 1838–9,	1,360,532
" " 1826–7,	957,281	" " 1839–40,	2,177,835
" " 1827–8,	720,593	" " 1840–1,	1,634,945
" " 1828–9,	857,744	" " 1841–2,	1,683,574
" " 1829–30,	976,845	" " 1842–3,	2,378,875
" " 1830–1,	1,038,848	" " 1843–4,	2,030,409
" " 1831–2,	987,477	" " 1844–5,	2,394,503
" " 1832–3,	1,070,438	" " 1845–6,	2,100,537
" " 1833–4,	1,205,394	" " 1846–7,	1,778,651
" " 1834–5,	1,254,328	" " 1847–8,	2,347,634
" " 1835–6,	1,360,725	" " 1848–9,	2,728,596

CONSUMPTION.

Total crop of the United States, as above stated, bales			2,728,596
Add stocks on hand Sept. 1, 1848; southern ports, 113,471; northern, 57,997			171,468
Makes a supply of			2,900,064
Deduct export to foreign ports,	2,227,844		
Less, foreign included,	1,122		
		2,226,722	
Stock on hand Sept. 1, 1849, southern ports, 72,468; northern, 82,285,		154,753	
Burnt at Charleston and Mobile,		550	
			2,382,025
Taken for home use,			518,039

QUANTITY CONSUMED BY, AND IN HANDS OF, MANUFACTURERS.

1848–9, bales	518,039	1846–7, bales	427,°
1847–8,	531,772	1845–6,	422

1844–5	bales...389.006	1834–5	bales...216,888
1843–4	346.744	1833–4	196.413
1842–3	325.129	1832–3	194.412
1841–2	267.850	1831–2	173,800
1840–1	207.288	1830–1	182,142
1839–40,	295.193	1829–30	126,512
1838–9	276,018	1828–9	118,853
1837–8,	246.063	1827–8,	120.593
1836–7,	222.540	1826–7	149,516
1835–6	236.733		

In our last annual statement, the estimate of cotton taken for consumption for the year ending September 1, 1848, in the States south and west of Virginia, was probably below the mark. The following for the past year is believed to be very nearly correct. The number of mills has increased since that time, and is still increasing. The following estimate is from a judicious and careful observer at the South, of the quantity so consumed, and not included in the receipts. Thus, in—

North Carolina	bales	...20.000	Ohio	bales	... 9,000
South Carolina,	"	...15.000	Pittsburg, Wheeling, etc	"	...12,500
Georgia,	"	...20.500	Missouri, Indiana, Illinois, etc.,	"	... 9,000
Alabama	"	... 7.000			
Tennessee,	"	...12,000	Total, to September 1, 1849,		110,000
Kentucky,	"	... 5,000	Same time, 1848,		75,000

Virginia manufactures more than 20,000 bales, and obtains a portion of it by importations from the southern and northern ports.

To which should be added the quantity burnt in the interior, and that lost on its way to market; these, added to the crop as given above, received at the shipping ports, will show very nearly the amount raised in the United States the past season—say, in round numbers, 2,840,000 bales.

If these figures be under or overrated, we request of gentlemen interested in the cotton manufacture in the several States named above, or of any others well informed on the subject, to furnish us more correct ones.

The quantity of new cotton received at the shipping ports up to the 1st inst., amounted to about 575 bales, against about 3,000 bales last year.

The shipments given in the above statement from Texas, are those by sea only; a considerable portion of the crop of that State finds its way to market via Red River, and is included in the receipts at New Orleans.—*N. Y. Commercial List.*

SLAVE AND FREE NEGRO LAWS OF SOUTHERN STATES.

SOUTH CAROLINA*—BY HON. J. B. O'NEALL.

SEC. 46. Free negroes are *sui generis.* The act of 1822, section 8, requires every male free negro, above the age of fifteen to have a guardian, who must be a respectable freeholder of the district (who may be appointed by the clerk). Notwithstanding this provision, the free negro is still, as I have said, sui juris, when of and above the age of twenty-one. The guardian is a mere protector of the negro, and a guarantor of his good conduct to the public.

SEC. 47. They may contract and be contracted with. Their marriages with one another, and even with white people, are legal. They may purchase, hold and transmit, by descent, real estate. They can mortgage, aliene, or devise the same. They may sue and be sued, without noticing their respective guardians.

SEC. 48. They are entitled to protect their persons by action, indictment, and the writ of habeas corpus (except that the writ of habeas corpus is denied to those who enter the state contrary to the act of 1835. They cannot repel force by force—that is, they cannot strike a white man who may strike any of them.

SEC. 49. It has, however, been held, in a case decided in the Court of Appeals, and not reported, that insolence on the part of a free negro would not excuse an assault and battery. From that decision I dissented, holding, as in the State v. Harden, 2d Speers (note), 155, "That words of impertinence or insolence addressed by a free negro to a white man, would justify an assault and battery."

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* Continued from September number.

"As a general rule, I should say, that whatever, in the opinion of the jury, would induce them, as reasonable men, to strike a free negro, should in all cases be regarded as a legal justification in an indictment."

SEC. 50. In addition to the common law, remedies, by action of assault and battery and false imprisonment, and indictments for the same, the act of '37 furnishes another guarantee for the protection of free negroes, mulattoes, or mestizoes, by declaring any one convicted of their forcible abduction, or assisting therein, to be liable to a fine not less than $1,000, and imprisonment not less than twelve months.

SEC. 51. Free negroes, mulattoes and mestizoes, cannot be witnesses or jurors in the Superior Courts. They can be jurors nowhere. They cannot even be witnesses in inferior courts, with the single exception of a magistrate's and freeholder's court, trying slaves or free negroes, mulattoes or mestizoes, for criminal offenses, and then without oath. This was, however, not always the case, to the entire extent which I have stated. It was at one time held, that any *person of color*, if the issue of a free white woman, is entitled to give evidence, and ought to be admitted as a witness, in our courts. This was predicated of a clear mistake of the civil law maxim of *partus sequitur ventrem*, and of the provision in the 1st section of the act of 1740, that the offspring should follow the condition of the mother, which only mean, that slavery or freedom should be the condition of the offspring, but where the words mulatto or mestizo are ever used as designating a class, they are to be interpreted by their common acceptation.

SEC. 52. It is singular that the 13th and 14th sections of the act of 1740, directing who may be witnesses against slaves, free negroes, &c., should have been confined to free Indians and slaves, who are to be examined without oath. From which it would seem that free negroes, mulattoes, &c., might be examined in such cases, as at common law, upon oath. But the practice under the act has been uniform, as I have before stated it. I think it a very unwise provision and course of practice to examine any witnesses, in any court or case, without the sanction of an oath. Negroes (slaves or free) will feel the sanctions of an oath with as much force as any of the ignorant classes of white people in a Christian country. They ought, too, to be made to know, if they testify falsely, they are to be punished for it by human laws. The course pursued on the trial of negroes in the adduction and obtaining testimony, leads to none of the certainties of truth. Falsehood is often the result, and innocence is thus often sacrificed on the shrine of prejudice.

SEC. 53. Free negroes, mulattoes and mestizoes, may make all necessary affidavits on collateral matters, in cases in the Superior Courts, in which they may be parties, as on motions of postponement, &c. So, too, they may in such court take the oaths under the insolvent debtor's or prison bounds' act, and under the acts of Congress to obtain a pension.

SEC. 54. Free negroes, mulattoes and mestizoes (except such as [illegible]proved, to the satisfaction of the tax collector, to be incapable of making a livelihood), are liable to a capitation tax (fixed by each tax act); they may make a return personally, or any member of the family may maks a return for the rest; or if one be sick, he or she may make such return by agent. They are liable to be double taxed for not making a return of themselves.

SEC. 55. This tax seems to have originated in 1805. The act of 1833 directs the issuing of executions against free negroes, mulattoes and mestizoes, who may fail to pay the tax, and that, under *them*, they may be sold for a term not exceeding one year; provided, however, that they shall in no instance be sold for a longer term than may be necessary to pay the taxes due; but they cannot be sold under the double tax executions to be issued against them for not making returns of themselves. Such executions go against property merely. The constitutionality of the provision for the sale of free negroes in payment of their taxes, is exceedingly questionable.

SEC. 56. The term "*free person of color*," used in many of our acts, since 1840, has given rise to many imperfect and improper notions. Its meaning is confirmed by the act of 1740, and all proper constructions of our *code noir* to *negroes*, *mulattoes* and *mestizoes*. In common parlance it has a much wider signification; *hence the danger of its use*; for all who have to execute the acts of the Legislature are not *learned lawyers* or judges. The Legislature ought to use the words of the act of 1740, "Free negroes, mulattoes and mestizoes," and then every one would have a certain guide to understand the words used.

SEC. 57. The act of 1835, declares it to be unlawful for any free negro, *or person of color*, to migrate into this State, or to be brought or introduced within its limits, by land or water.

SEC. 58. Any free negro, or person of color, not being a seaman on board any vessel arriving in this State, violating this law, shall, and may, be seized by any white person, or by the sheriff or constable of the district, and carried before any magistrate of the district, city or parish—who is authorized to bail or commit the said free negro—and to summon three freeholders, and form a court for the trial and examination of the said free negro, or person of color, within six days after his arrest; and, on conviction, order him to leave the State—and, at the time of conviction, to commit him to jail, until he can leave the State, or to release him, on bail, not longer than fifteen days. And if, after being bailed and ordered to leave the State, the free negro, or person of color, shall not leave within fifteen days, or having left shall return, shall be arrested, and on conviction, before a court of one magistrate and three freeholders, he shall be liable to such corporal punishment as the court shall order; if, after such punishment, the offender shall still remain in the State "longer than the time allowed" (which is, I suppose, the time previously fixed, fifteen days), or shall return, upon proof and conviction, before a court of one magistrate and three freeholders, the free negro, or person of color, may be sold, and the proceeds appropriated, one-half to the use of the State, and the other half to the use of the informer.

SEC. 59. If the free negro, or person of color, come into this State, on board any vessel, as a cook, steward, mariner, or in any other employment, the sheriff of the district is to apprehend, and confine in jail, such free negro, or person of color, until the vessel be hauled off from the wharf, and ready for sea. The act provides, that on the apprehension of any free negro, or person of color, on board any vessel, the sheriff shall cause the captain to enter into a recognizance, with good and sufficient security, in the sum of $1,000 for each free negro, or person of color, who may be on board his said vessel, that he will comply with the requisitions of this act, which are, that he will, when ready for sea, carry away the said free negro, or person of color, and pay the costs of his detension; but if the captain be unable, or refuse so to do, he is to be required, by the sheriff, to haul his vessel in the stream, one hundred yards distance from the shore, and there remain until ready for sea. If this be not complied with, in twenty-four hours, the captain is liable to be indicted, and, on conviction, is to be fined not exceeding $1,000, and imprisoned not exceeding six months.

SEC. 60. Whenever any free negro, or person of color, shall be apprehended and committed for coming into this State by sea, it is the duty of the sheriff to call upon some magistrate, to warn the offender never again to enter the State, and, at the time of giving such warning, the magistrate is to enter the name of such free negro, or person of color, in a book, to be kept by the sheriff, with a description of his person and occupation, which book is evidence of the warning, and is to be deposited in the clerk's office, as a public record. If the offender shall not depart the State, in case the captain shall refuse, or neglect, to carry him or her away, or, having departed, shall ever again enter into the State, he or she is liable to be dealt with, and incur the forfeiture prescribed in the first section.

SEC. 61. If any free negro, or person of color, before the passage of the act of 1835, or since, has left, or shall leave, the State, they are forever prohibited from returning, under the penalty of the first section.

SEC. 62. The eighth section of the act, excepts from its operation free negroes and persons of color, coming into the State from shipwreck, but declares them liable to arrest and imprisonment, as provided in the second section, and to incur all its penalties, if, within thirty days, they shall not leave the State.

SEC. 63. The ninth section excepts free negroes and persons of color, who shall arrive as cooks, stewards, or mariners, or in other employment, in any vessel of the United States, or on board any national vessel of the navies of any of the European, or other powers, in amity with the United States, unless they shall be found on shore, after being warned, by the sheriff, to keep on board their vessels. The act does not extend to free American Indians, free Moors, or Lascars, or other colored subjects beyond the Cape of Good Hope, who may arrive in any merchant vessel.

Sec. 64. Free negroes, and *free persons of color* (meaning, of course, mulattoes and mestizoes), are prohibited (unless they have a ticket from their guardian) from carrying any fire-arms, or other military or dangerous weapons, under pain of forfeiture, and being whipped, at the discretion of a magistrate and three freeholders. They cannot be employed as pioneers, though they may be subjected to military fatigue duty.

Sec. 65. The first, second, third, and fifth sections of the act of 1836, are, to my mind, of so questionable policy, that I should be disposed to repeal them. They carry with them so many elements of discord with our sister States, and foreign nations, that, unless they were of paramount necessity, which I have never believed, we should, at once, strike them out. I am afraid, too, there are many grave constitutional objections to them, in whole, or in part.

EDITOR'S DEPARTMENT.

1. Principles of the Mechanics of Machinery and Civil Engineering, by Julius Weisbach, Professor of Mechanics and Applied Mathematics in the Royal Mining Academy of Freiberg. First American edition; edited by Walter R. Johnson, civil engineer; in two volumes, with eight hundred illustrations: 1849. From J. B. Steel, New Orleans.

Lea & Blanchard, of Philadelphia, are the publishers of this work, and have presented it to the public in the most admirable style of execution. Scientific works have too generally appeared in slovenly costume; but in the series now being published by these gentlemen, no fault of the sort can be found. The wood illustrations are in a new and very imposing style, and are perfect specimens of art.

Professor Weisbach has, in this volume, presented important questions in engineering and architectural construction, in a simple form to the student. The second part contains the only theoretical treatise on water power, of any practical value, in our language. The subject of reaction wheels, and other turbines, is ably treated, and also the water pressure engine. Many valuable pages on the strength of materials have been added by the American editor.

"The fact that the public has often been basely imposed upon, by reason of employing, as architects and engineers, those who would pander to the cupidity of contractors for materials and labor and erect public works wholly discreditable to the nation, is an additional reason why works written for the purpose of imparting correct information should be diligently studied."

2. Lady Alice, or the New Una; a novel; 1849. This is one of the popular works from the house of Appleton & Co., New York. It has created quite a sensation, and been reviewed in almost all the foreign and American periodicals. It abounds in representation of the ideal rather than those founded upon fact. The author is an American clergyman. The moral of the work has been severely criticised. The Literary Messenger says, very bitterly, "As a theological exposition, it is a slanderous caricature of Catholic Christianity; as a moral treatise, it is licentious in the extreme; as a work of art, professedly upholding a theory, it is a wretched failure." The reader will, however, determine all of these points for himself, and procure the work now grown famous. J. B. Steel, Camp street.

3. Rambles in Yucatan, with a Visit to the Ruins, with numerous illustrations; by B. M. Norman. Philadelphia, Carey & Hart, 1849. This is the seventh edition of a work which has won much reputation for its author, and taken position among our standard literature. We noticed the first edition several years ago. Mr. Norman has added a new preface, in which he finds cause for gratulation in the wider interest which is every day felt in American antiquities, as evinced in the publications of the Smithsonian Institute, etc. We trust it may continue to grow, and that the labors of Mr. Norman may be more and more appreciated.

4. The Appeal of Gen. Santa Anna, in regard to the charges brought against him by Don Ramon Gamboa. Translated into English. New Orleans, J. L. Sollee, 1849. This is a curious work, and abounds in most interesting material regarding the manner in which the late Mexican war was managed in that country. Personages, events, civil and military movements, are discussed in bold and able manner, and in a style the most elevated. Every American must take an interest in the disclosures here made. The work is elegantly translated by Diego Morphy, of our city,

and but a small edition was issued, in a style of typography perhaps never surpassed in New Orleans, if ever equalled.

5. THE MAN OF LETTERS: an Address before the Societies of Wake Forest College, of North Carolina, by J. L. Reynolds; 1849. This production is just what might have been expected from so erudite a scholar and so eloquent a writer as Mr. Reynolds. His illustrations are selected from the most elevated in the classics of ancient or modern times, and they are presented in a style as chaste and beautiful as the English tongue can afford. We have before admired the productions of Mr. Reynolds's pen, and the present effort well sustains an early acquired reputation.

6. SOUTHERN LITERARY MESSENGER, September and October, 1849. Richmond.
7. NORTH AMERICAN REVIEW, October, 1849. Boston.
8. HUNT'S MERCHANTS' MAGAZINE, October, 1849. New York.
9. PLOUGH, LOOM AND ANVIL. Philadelphia. J. S. Skinner. October.
10. WESTERN JOURNAL, St. Louis, Tarver & Risk. October.
11. LONDON QUARTERLY, July, New York, Leonard Scott & Co.
12. WESTMINSTER REVIEW, July, " "
13. EDINBURGH REVIEW, July, " "
14. BLACKWOOD, September. " "
15. NORTH BRITISH REVIEW, August. " "

This is a double number of that most popular of all southern publications, the *Literary Messenger*, and is the best, in our opinion, yet published. Among its best papers are, a searching review of the "*Lady Alice*," and an analysis of "Fremont's Expeditions." We call attention to the prospectus of this journal among our advertisments. *The North American* holds its position in the world of letters. Among the articles are, "French Ideas of Democracy," "Lyell's Travels in the United States," "Grimke on Free Institutions," "The Revolution in Sicily," etc. Mr. *Hunt's Magazine* contains an able paper from T. P. Kettell, on the "Finances, etc., of Ohio," and another from Mr. Leavitt on "Cheap Postage." The usual valuable statistics are included. In the *Western Journal* we have, from Mr. Tarver, an interesting discussion of the "Corporation Laws of Missouri," and also a paper on "Iowa," which we hope to copy. The article entitled "Pacific Railway," by J. Loughborough, of St. Louis, is perhaps the best yet published upon the subject, and was intended to influence the action of the great convention in that city. The writer criticises a paper in our July number upon this road, but in a spirit of which we can have no cause to complain. We commend the Journal to wide favor. In regard to the "*Republication of Foreign Reviews*," by Leonard, Scott & Co., we can only say they are the cheapest and best literature in the English language. The best papers in the numbers before us are, "Our Slave Trade Policy," "The Railway System of Great Britain," the "Dead Sea" (rather prejudiced), "Free Trade," "Transportation," "Austria and Hungary," "Literature of the Middle Ages," "Louis Napoleon," "Lyell's Travels in the United States," "Austria and Central Italy," "Democracy in France," "The Caxtons," "Chauteaubriand's Memoirs." The *Plough, Loom and Anvil* upholds many theories which we oppose, but is yet conducted with spirit and with abundant illustrations. It always affords us pleasure to obtain the arguments on the other side of every question. Mr. Skinner's work gains daily in popularity.

16. TO THE PLANTERS.—SUGAR AND COTTON.

The importance of an AGENCY in New Orleans, in connection with the Review, to aid the planters in the *purchase and sale of estates*, has frequently suggested itself. We have determined to start it. As the Review circulates largely in all the southern and western States, and is now getting a northern circulation, planters will have an opportunity of offering their estates to the best advantage. They will be charged for the advertisment of estates, according to the space occupied and time advertised, *on reasonable terms*, in the pages of the Review, as will be agreed upon. When sales are effected through the AGENCY, the usual commission will be charged. *Editorial notices* will be called to the estates. Messrs. Weld & Co., publishers of the Review, active and energetic business men, will take *exclusive* charge of this department. In the present number, we call attention to a large plantation in Attakapas, Louisiana, among our advertisements.

N. B. All letters relating to the business of the Review will be directed to WELD & Co., No. 68 Camp street, New Orleans; all relating to editorial, to J. D. B. DE BOW, care of WELD & Co., publishers Commercial Review, New Orleans.

17. OUR BOUND VOLUMES COMPLETE.

We have still a few sets remaining of the Old Series of the Commercial Review, in handsomely bound volumes, 1846–1849. We wish those of our subscribers who have not the work complete would order them, or have them taken by the public or private libraries in their vicinity. In a short time it will be impossible to obtain them on any terms, as the edition printed was small. We are anxious to distribute the volumes, and will deliver them at any points. Address WELD & Co., Publishers, No. 68 Camp street, New Orleans.

Agriculture Bk—

machine, as simple as may be. The inventor thinks he gains power, without losing speed, by this arrangement of the machinery. If so, the thing is done. There will be three frames for plows, each to contain five plows, attached by iron rods to the axle-tree of the large wheels. The breaking up of plows will be so arranged as to follow each other, cutting only six inches with one plow, but yet cutting, in all, twenty-four inches deep. In this way the ground will be much more thoroughly pulverized than if a furrow-slice, twenty-four inches thick, was cut with one plow. When you get to the end of the field, by a very simple arrangement, the plows will unset, eight or ten feet off the ground, and, by throwing one wheel out of gear, and going ahead on the other, the machine will turn short round, the plow passing over the top of the fence. On a smooth firm road it will travel at the rate of twenty-five miles an hour. But, as your friend of the Union says, "*nous verrons.*"

Respectfully, W. J. MINOR.

3. CULTIVATION OF THE TEA PLANT.

GREENVILLE, SOUTH CAROLINA, August 23, 1849.

You must remember Mr. Junius Smith. He was originally from Litchfield, Connecticut, a student of Yale College, a merchant of New York, but the greater portion of his life a resident of London. Several years were devoted by him to the great subject of Atlantic steam navigation. Having demonstrated that this could be accomplished by the passage of the Sirius, he continued the agent of that line until the loss of the President, when the company wound up their concerns, with an immense loss to himself. Mr. Smith was obliged to turn his attention to some other occupation. His exertions were mainly instrumental in getting a bill through Congress, empowering the Postmaster General to make contracts for carrying the mail; but instead of giving the contract for the Atlantic mail to Mr. Smith, he gave it to Mr. Mills of your city.

Mr. Smith had but one child, who married the Rev. Mr. Maddock, a clergyman of the English church, who was afterward appointed by the East India Company, a chaplain, and removed with his wife to a station in the Himalaya mountains, where the company have large tea plantations. Some three years ago, this daughter wrote a letter to her father, calling his attention to the subject of tea, and recommending its introduction into the United States. The old venerable was struck with the idea; and, after giving the subject the most attentive examination, became convinced that it was practicable, and, in the 69th year of his age, took the matter in hand with the greatest earnestness. He found that the soil, climate, and latitude of several of the States of this Union, by comparison with the great tea districts of China, were adapted to its cultivation, for the tea plant flourishes in its greatest strength between the 20th and 40th degree of latitude, and that, contrary to popular opinion, is proof against severe frosts, snow storms, and all the stern severities of winter. After making a very extended examination in different States, he selected, as the best spot he could find for the experiment, this region. His tea garden is about three-fourths of a mile from this village. In the fall of 1848, about 500 plants were received from China, via London, and in December they were planted in his garden. A considerable quantity of tea seed was planted at the same time.

I now proceed to give you the result. Every one knows what a tremendously severe winter and spring were the last. The plants were left to take care of themselves; and yet, the larger portion of them are unharmed, and are now in a flourishing condition. I saw several specimens of the green and black plant in bud. The experiment has succeeded beyond a doubt. Mr. Smith has only to follow it up, and increase his stock by new plants, cuttings, and seed. It is of slow growth. Like the oak, the tea plant buds one year, but does not fruit till the next. Next year, I presume, Mr. Smith will begin to pick tea, although his great object, for some time to come, will be to increase the quantity of his plants. The tea seed was planted at a wrong season, and did not amount to anything. He is daily expecting an increased number and assortment of plants, and more seed; the latter, if planted at the right season (in the spring), will succeed, I think. Mr. Smith has a garden superior to anything about here. It contains only an acre of ground. He has erected a snug little cottage in one corner of it, where he is as happy, contented, and confident of success, as man can be. Having satisfied himself, by actual experiment, that his theory was correct, he has prepared to increase his operations, by purchasing about three hundred acres of suitable land, on the Saluda river, nine miles from the village, where his future operations will be on an increased scale. But his tea garden and plantation do not occupy the whole attention of Mr. Smith. He is an agriculturist and horticulturist by experience. He has introduced into this section, and brought to perfection, the finest of foreign fruits. I noticed a large number of fig trees, almond trees, dates, and grapes, which he has procured from Europe, and which will, undoubtedly, flourish here as well as there. I have been daily in the habit of eating fresh figs as good as any I ever met with in Europe and I see no reason why they should not be cultivated and prepared for the northern market, to an extent that shall supercede the necessity of their importation from abroad. The same remarks will apply to dates and almonds. It is really refreshing to see an intelligent old man, who has passed his three score and ten, devoting the remainder of his life to successfully accomplish an object which can never benefit him personally. I have no doubt in my mind, that the introduction of the tea plant into this country will prove of vast and incalculable benefit to the Union. It has been attended with great expense, all of which has been borne by the old gentleman himself. With his own resources, he has published a work on the cultivation of the tea plant, written by himself, and which his actual experiments have partially demonstrated to be true. Mr. Smith estimates the annual consumption of tea in the United States, at eleven million of pounds, in Europe, fifty; total sixty-one millions.

He estimates the productions in China to be over nine hundred millions of pounds, of which the Chinese export only about seventy million. He supposes that an acre of land will produce five hundred and forty-seven pounds; consequently the cultivation of 20,109 acres of land in the fourteen tea-growing States, will supply the present consumption of the United States. To supply Europe would require 91,411 acres of land. He supposes that there are fourteen of our States that would grow tea, and that 111,520 acres of land, cultivated as tea plantations, averaging 7,965 for each of the fourteen States, will supply the consumption of the article both for Europe and the United States. It may be some years before tea plantations become general, but that they will eventually be found in this region, I do not doubt. Mr. Smith deserves a great share of credit for his bold undertaking. More than that: this State, that he has honored by selecting for his first experiment, and to which it will prove of great benefit, ought to encourage and sustain the old gentleman, and give him the means to extend his operations to an extent that will prove of immediate benefit to the State and the country at large.—*N. Y. Herald.*

4. COTTON CROP OF THE UNITED STATES, 1849.

STATEMENT AND TOTAL AMOUNT FOR THE YEAR ENDING AUGUST 31, 1849.

	Bales.	*Total.*	1848.
New Orleans—Export—Foreign, 901,462; coastwise, 265,841; stock 1st September, 1849, 15,480	1,182,783		
Deduct—Stock 1st September, 1848, 37,401; received from Mobile, 35,164; Florida, 5,065; Texas, 11,256	88,986		
		1,093,797	1,190,733
Mobile—Export—Foreign, 396,311; coastwise, 141,069; burnt at Mobile, 401; stock 1st September, 1849, 5,096	542,877		
Deduct—Stock 1st September, 1848, 23,584; received from New Orleans, 587	24,171		
		518,706	436,336
Florida—Export—Foreign, 79,759; coastwise, 120,319; stock 1st September, 1849, 615	200,693		
Deduct—Stock 1st September, 1848	507		
		200,186	153,776
Texas—Export—Foreign, 2,495; coastwise, 36,627; stock 1st September, 1849, 452	39,574		
Deduct—Stock 1st September, 1848	747		
		38,827	39,742
Georgia—Export from Savannah—Foreign—Uplands, 207,402; Sea islands, 10,622; coastwise—Uplands, 186,484; Sea islands, 948; from Darien—New York, none; stock in Savannah 1st September, 1849, 11,500; stock in Augusta and Hamburg 1st September, 1849, 13,819	430,775		
Deduct—Stock in Savannah and Augusta 1st September, 1848, 36,603; received from Florida, 2,800	39,403		
		391,372	254,825

their vessels. The act does not extend to free American Indians, free Moors, or Lascars, or other colored subjects beyond the Cape of Good Hope, who may arrive in any merchant vessel.

Sec. 64 Free negroes, and *free persons of color* (meaning, of course, mulattoes and mestizoes), are prohibited (unless they have a ticket from their guardian) from carrying any fire-arms, or other military or dangerous weapons, under pain of forfeiture, and being whipped, at the discretion of a magistrate and three freeholders. They cannot be employed as pioneers, though they may be subjected to military fatigue duty.

Sec. 65. The first, second, third, and fifth sections of the act of 1836, are, to my mind, of so questionable policy, that I should be disposed to repeal them. They carry with them so many elements of discord with our sister States, and foreign nations, that, unless they were of paramount necessity, which I have never believed, we should, at once, strike them out. I am afraid, too, there are many grave constitutional objections to them, in whole, or in part.

EDITOR'S DEPARTMENT.

1. Principles of the Mechanics of Machinery and Civil Engineering, by Julius Weisbach, Professor of Mechanics and Applied Mathematics in the Royal Mining Academy of Freiberg. First American edition; edited by Walter R. Johnson, civil engineer; in two volumes, with eight hundred illustrations: 1849. From J. B. Steel, New Orleans.

Lea & Blanchard, of Philadelphia, are the publishers of this work, and have presented it to the public in the most admirable style of execution. Scientific works have too generally appeared in slovenly costume; but in the series now being published by these gentlemen, no fault of the sort can be found. The wood illustrations are in a new and very imposing style, and are perfect specimens of art.

Professor Weisbach has in this volume, presented important questions in engineering and architectural construction, in a simple form to the student. The second part contains the only theoretical treatise on water power, of any practical value, in our language. The subject of reaction wheels, and other turbines, is ably treated, and also the water pressure engine. Many valuable papers on the strength of materials have been added by the American editor.

"The fact that the public has often been basely imposed upon, by reason of employing, as architects and engineers, those who would pander to the cupidity of contractors for materials and labor, and erect public works wholly discreditable to the nation, is an additional reason why works written for the purpose of imparting correct information should be diligently studied."

2. Lady Alice; or the New Una; a novel; 1849. This is one of the popular works from the house of Appleton & Co., New York. It has created quite a sensation, and been reviewed in almost all the English and American periodicals. It abounds in representation of the ideal rather than [illegible] based upon fact. The author is an American clergyman. The moral of the work has been severely criticised. The Literary Messenger says, very bitterly, "As a theological exposition of the [illegible] features of Catholic Christianity; as a moral treatise, it is licentious in the extreme; as a work of art, professedly upholding a theory, it is a wretched failure." The [illegible] would be to examine all of these points for himself, and procure the work now [illegible] at J. B. Steel, Camp-street.

3. Rambles in Yucatan, with a Visit to the Ruins, with numerous illustrations; by B. M. Norman. Philadelphia, Carey & Hart, 1849. This is the seventh edition of a work which has won many [illegible] for its author, and taken position among our [illegible] literature. We noticed the first edition several years ago. Mr. Norman has added a new preface, in which he finds cause for [illegible] in the wider interest which is every day felt in American antiquities, as evinced [illegible] of the Smithsonian Institute, etc. We trust it may continue to grow, and that [illegible] of Mr. Norman may be more and more appreciated.

4. [illegible] Gen. Santa Anna, in regard to the charges [illegible] against him by Don Ramon [illegible] translated into English. New Orleans, J. L. Sollée, [illegible]. This is a curious work, and [illegible] interest. The material regarding the manner in which the late Mexican war [illegible] in that country. Personages, events, civil and military movements, are discussed in [illegible] able manner, and in a style the most elevated. Every American must take an interest in [illegible] here made. The work is elegantly translated by Diego Murphy, of our city,

and but a small edition was issued, in a style of typography perhaps never surpassed in New Orleans, if ever equalled.

5. THE MAN OF LETTERS; an Address before the Societies of Wake Forest College, of North Carolina, by J. L. Reynolds; 1849. This production is just what might have been expected from so erudite a scholar and so eloquent a writer as Mr. Reynolds. His illustrations are selected from the most elevated in the classics of ancient or modern times, and they are presented in a style as chaste and beautiful as the English tongue can afford. We have before admired the productions of Mr. Reynolds's pen, and the present effort well sustains an early acquired reputation.

6. SOUTHERN LITERARY MESSENGER, September and October, 1849. Richmond.

7. NORTH AMERICAN REVIEW, October, 1849. Boston.

8. HUNT'S MERCHANTS' MAGAZINE, October, 1849. New York.

9. PLOUGH, LOOM AND ANVIL, Philadelphia, J. S. Skinner. October.

10. WESTERN JOURNAL, St. Louis, Tarver & Risk. October.

11. LONDON QUARTERLY, July, New York, Leonard Scott & Co.

12. WESTMINSTER REVIEW, July, " "

13. EDINBURGH REVIEW, July, " "

14. BLACKWOOD, September, " "

15. NORTH BRITISH REVIEW, August, " "

This is a double number of that most popular of all southern publications, the *Literary Messenger*, and is the best, in our opinion, yet published. Among its best papers are, a scorching review of the "*Lady Alice*," and an analysis of "Fremont's Expeditions." We call attention to the prospectus of this journal among our advertisments. *The North American* holds its position in the world of letters. Among the articles are, "French Ideas of Democracy," "Lyell's Travels in the United States," "Grimke on Free Institutions," "The Revolution in Sicily," etc. Mr. *Hunt's Magazine* contains an able paper from T. P. Kettell, on the "Finances, etc., of Ohio," and one from Mr. Leavitt on "Cheap Postage." The usual valuable statistics are included. In the *Western Journal* we have, from Mr. Tarver, an interesting discussion of the "Corporation Laws of Missouri," and also a paper on "Iowa," which we hope to copy. The article entitled "Pacific Railway," by J. Loughborough, of St. Louis, is perhaps the best yet published upon the subject, and was intended to influence the action of the great convention in that city. The writer criticises a paper in our July number upon this road, but in a spirit of which we can have no cause to complain. We commend the Journal to wide favor. In regard to the "*Republication of Foreign Reviews*," by Leonard, Scott & Co., we can only say they are the cheapest and best literature in the English language. The best papers in the numbers before us are, "Our Slave Trade Policy," "The Railway System of Great Britain," the "Dead Sea" (rather prejudiced), "Free Trade," "Transportation," "Austria and Hungary," "Literature of the Middle Ages," "Louis Napoleon," "Lyell's Travels in the United States," "Austria and Central Italy," "Democracy in France," "The Caxtons," "Chauteaubriand's Memoirs." The *Plough, Loom and Anvil* upholds many theries which we oppose, but is yet conducted with spirit and with abundant illustrations. It always affords us pleasure to obtain the arguments on the other side of every question. Mr. Skinner's work gains daily in popularity.

16. TO THE PLANTERS.—SUGAR AND COTTON.

The importance of an AGENCY in New Orleans, in connection with the Review, to aid the planters in the *purchase and sale of estates*, has frequently suggested itself. We have determined to start it. As the Review circulates largely in all the southern and western States, and is now getting a northern circulation, planters will have an opportunity of offering their estates to the best advantage. They will be charged for the advertisment of estates, according to the space occupied and time advertised, *on reasonable terms*, in the pages of the Review, as will be agreed upon. When sales are effected through the AGENCY, the usual commission will be charged. *Editorial notices* will be called to the estates. Messrs. Weld & Co., publishers of the Review, able and energetic business men, will take *exclusive* charge of this department. In the present number, we call attention to a large plantation in Attakapas, Louisiana, among our advertisments.

☞ All letters relating to the business of the Review will be directed to WELD & Co., No. 68 Camp street, New Orleans: all relating to editorial, to J. D. B. DE BOW, care of Weld & Co., publishers Commercial Review, New Orleans.

17. OUR BOUND VOLUMES COMPLETE.

We have still a few sets remaining of the Old Series of the Commercial Review, in handsomely bound volumes, 1846—1849. We wish those of our subscribers who have not the work complete would order them, or have them taken by the public or private libraries in their vicinity. In a short time it will be impossible to obtain them on any terms, as the edition printed was small. We are anxious to distribute the volumes, and will deliver them at any points. Address WELD & Co., Publishers, No. 68 Camp street, New Orleans.

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